

CHARLEROI-MONESSEN BRIDGE

Pennsylvania Historic Bridges Recording Project
Spanning Monongahela River at State Rt. 2018
North Charleroi
Washington County
Pennsylvania

HAER No. PA-467

HAER
PA
63-NOCHA,
1-

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

HISTORIC AMERICAN ENGINEERING RECORD

National Park Service
1849 C Street, NW
Washington, DC 20240

HISTORIC AMERICAN ENGINEERING RECORD

CHARLEROI-MONESSSEN BRIDGE

HAER No. PA-467

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Location: Spanning Monongahela River at State Route 2018, between North Charleroi, Washington County, and Monessen, Westmoreland County, Pennsylvania.

USGS Quadrangle: Monongahela, Pennsylvania (1954, photorevised 1979).

UTM Coordinates: 17/593340/4444970

Date of Construction: 1906-07.

Designer: Emil Swensson, engineer for Mercantile Bridge Company.

Builder: American Bridge Company.

Present Owner: Pennsylvania Department of Transportation.

Present Use: Vehicular bridge.

Significance: The Charleroi-Monessen Bridge is significant as a rare surviving example of a long, multiple-span metal truss bridge. Built as a toll bridge to carry vehicular, pedestrian, and trolley traffic across the Monongahela River, the bridge improved regional transportation and contributed toward the economic development of Monongahela River valley towns. Construction of a bridge across the Monongahela River at North Charleroi surmounted a formidable natural barrier and completed a regional street railroad transportation network that stretched from urban Pittsburgh to developing Westmoreland County, Pennsylvania. The Charleroi-Monessen Bridge was listed in the National Register of Historic Places in 1988.

Historian: Dr. David S. Rotenstein, August 1997.

Project Information: This bridge was documented by the Historic American Engineering Record (HAER) as part of the Pennsylvania Historic Bridges Recording Project - I, co-sponsored by the Pennsylvania Department of Transportation (PennDOT) and the Pennsylvania

CHARLEROI-MONESSEN BRIDGE

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Historical and Museum Commission during the summer of 1997.
The project was supervised by Eric DeLony, Chief of HAER.

CHRONOLOGY

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| 5 January 1900 | Charleroi and Monessen Bridge Company is chartered. |
| 3 March 1901 | Congress passes an act authorizing the Charleroi and Monessen Bridge Company to build a bridge. |
| 10 December 1903 | U.S. War Department approves plans for the Mercantile Bridge Company to build a bridge. |
| 19 January 1904 | Congress extends time for the Charleroi and Monessen Bridge Company to complete work on their bridge. |
| 14 March 1904 | Congress passes an act authorizing the Mercantile Bridge Company to build a bridge. |
| 25 March 1904 | Mercantile Bridge Company is chartered. |
| April-May 1906 | Mercantile Bridge Company acquires land for approaches. |
| 1 June 1906 | Newspaper reports that the first pier is completed on the bridge. |
| 7 August 1906 | Newspaper reports that the middle pier is capped and that structural steel work will begin 1 October. |
| 2 November 1906 | Newspaper reports delays on bridge due to lack of structural steel because of steel worker strike. |
| 8 February 1907 | Congress extends time for the Mercantile Bridge Company to complete work on their bridge. |
| 5 June 1907 | Accident causes collapse of falsework on bridge. |
| 17 July 1907 | Flood washes out bridge falsework, setting back construction three months. |
| 20 October 1907 | First streetcar crosses bridge, inaugurating trolley service. |

2 November 1907 Bridge is officially opened to traffic.

June 1988 Bridge is listed in the National Register of Historic Places.

DESCRIPTION

The Charleroi-Monessen Bridge is a nineteen-span structure comprised of three Pennsylvania (Petit) steel trusses and sixteen deck girder spans. The two main channel through-truss spans are each 400'-0" in length and the third through-truss span, over the Pittsburgh and Lake Erie and Pennsylvania railroads, is 200'-0" in length. The structure rests on four piers faced with coursed ashlar piers; its approaches have been rebuilt by PennDOT. Spanning the Monongahela River, the Pennsylvania Railroad (now Conrail), and a residential portion of the borough of North Charleroi on the west bank, and the Pittsburgh and Lake Erie Railroad on the east bank, the Charleroi-Monessen Bridge has a total length of 1,857'-6". The total width of the structure is 29'-0", within which there are two travel lanes and a walkway on the downstream (north) side of the bridge. The piers support the superstructure at an elevation of about 168 feet above pool full level in the Monongahela River. The two large (western) through-trusses are comprised of twenty panels with pinned connections. Vertical and diagonal tension elements include webbed lattice bracing and eye-bars.¹

HISTORICAL INFORMATION

Introduction

The Charleroi-Monessen Bridge spans the Monongahela River to connect Washington and Westmoreland counties, Pennsylvania. Formed by the confluence of the Tygarts Valley and West Fork rivers in the vicinity of Fairmont, West Virginia, the Monongahela flows in a northerly direction for approximately 128 miles to its confluence with the Allegheny River in Pittsburgh, where the two streams form the Ohio River.² According to the U.S. Army Corps of Engineers, the Monongahela River varied in width from 420 feet at its head to 900 feet in the vicinity of Pittsburgh at the time the Charleroi-Monessen Bridge was built.³ Prior to the construction of locks and dams and channel improvements, the Monongahela River was navigable along its entire length only by flats and rafts. The construction of locks and dams,

¹ More detailed engineering data was not forthcoming from the PennDOT District 12-0 office; the author was denied access to the district's bridge files.

² U.S. War Department, *War Department Annual Reports, 1920*, vol. 2, *Report of the Chief of Engineers* (Washington: U.S. Government Printing Office, 1920), 1351.

³ U.S. War Department, *War Department Annual Reports, 1920*, vol. 2, 1351.

undertaken by the Monongahela Navigation Company between 1841 and 1884, opened up the entire length of the river to commercial traffic.⁴

The vicinity of Fallowfield Township in which the Charleroi-Monessen Bridge is located was first known as "Lock Four" because of the lock and dam constructed on the west bank of the Monongahela River in 1844 by the Monongahela Navigation Company 41.2 miles upstream from the river's head.⁵ A limited amount of surviving historical cartographic data show sparse development at the Lock Four site during the last half of the nineteenth century. An atlas of Washington County published in 1876 shows the Lock Four complex consisting of the lock, a store, and a telegraph office.⁶ Plat maps filed with the County Recorder of Deeds during the early 1890s illustrate a modest plan of streets adjacent to the river, a wharf, the tracks of the Pennsylvania Railroad, and a Pennsylvania Railroad station.⁷ One local history suggests that the village of Lock Four was founded in 1885 by landowner John Conrad.⁸

Five months later, in a totally unrelated action, the U.S. Congress passed legislation authorizing the War Department to "acquire by purchase the locks and dams on the Monongahela River, in Pennsylvania, belonging to the Monongahela Navigation Company."⁹ The board of directors of the Monongahela Navigation Company instructed its attorney, Joseph K. McCammon, to write to the Secretary of War,

that the property of the company is not for sale; that the board has no power delegated to it to make such sale or to negotiate in respect to a sale, and that it

⁴ U.S. Congress, House, "Testimony Relative to Value of Improvements of Monongahela Navigation Company of Monongahela River, Pennsylvania, and to Commercial Importance of Free Navigation on Said River," 54th Cong., 1st sess., 1895, H. Doc. 78, 33.

⁵ The Monongahela Navigation Company was chartered 31 March 1836 by "An Act To authorize the Governor to incorporate a company to make a lock navigation on the River Monongahela"; see U.S. Public Law 262 (1836). The company began charging tolls to river traffic through its locks beginning in 1841. See George C. Martinet, *Charleroi: The First 100 Years* (Charleroi, Pennsylvania: Charleroi Area Historical Society, 1990), 12-13; U.S. War Department, *War Department Annual Reports, 1913*, vol. 2, *Report of the Chief of Engineers* (Washington: U.S. Government Printing Office, 1913); House, "Testimony," 33.

⁶ J. A. Caldwell, *Caldwell's Illustrated Centennial Atlas of Washington County, Pennsylvania* (Condit, Ohio: J. A. Caldwell, 1876).

⁷ Washington County, Pennsylvania, *Plan Book 1* (Recorder of Deeds, Washington County Courthouse, Washington, Pennsylvania), 20, 54.

⁸ Martinet, *Charleroi: The First 100 Years*, 12.

⁹ 53rd Cong., 2nd sess., chap. 299.

does not feel disposed to enter into dealings with the United States that may bear the semblance of a negotiation looking to sale of the property.¹⁰

After more than two years of legal proceedings, on 3 June 1896, Congress included a provision in a river and harbor act authorizing and directing the Secretary of War to undertake condemnation proceedings "for all of the property and its appurtenances of the Monongahela Navigation Company."¹¹ One year later, on 7 July 1897, the U.S. War Department acquired Monongahela Navigation Company locks and dams one through seven.¹²

At the turn of the twentieth century, the Monongahela River valley was reaping the benefits of an economic boom spurred by the construction of glass plants, steel mills, coal mining, and coke production. The river itself served as the vital conduit of coal and related products, as the Army Corps of Engineers wrote in 1895:

The Monongahela River, rising in West Virginia, running through Pennsylvania, and emptying into the Ohio at Pittsburg, has tributary to it a rich and well-settled country, of the products of which it is only necessary to consider the article of coal, the immense shipments of which are matters of public record. The item of coal alone which depends upon the Monongahela for an outlet to the markets of the country, is sufficient in amount to make this stream of great national importance.¹³

Towns such as Charleroi and Monessen sprang up along the banks of the river and in the hollows of streams dissecting the Monongahela River drainage. Many of the Monongahela River boroughs and villages were founded as company towns or had their economic vitality tied to a single industry such as steel, glass, or coal.¹⁴ Charleroi, named for the Belgian town, was settled

¹⁰ The Monongahela Navigation Company, it appears, blamed their impending dissolution on the coal industry. They blamed regional coal interests for pressuring Congress and the War Department to end the toll for navigation of the river. The position of the company was, as attorney McCammon wrote, "... if Congress desires that the company's property shall be taken for the benefit of the coal men, it must provide for condemnation proceedings and the payment of such compensation to the company as the courts may award upon the evidence produced"; see U.S. Congress, House, "Locks and Dams, Monongahela River," 53rd Cong., 3rd sess., 1895, Ex. Doc. 249, 2. The navigation company was not willing to let go without a fight, and it appears that they were sending a message to Congress that if Congress wanted the property, then Congress should come and get it if Congress was willing to pay the price. The company placed its value at \$4 million and an assessment by the War Department placed it at significantly less: \$2,482,554; see *ibid.*, 12.

¹¹ 54th Cong., 1st sess., chap. 314.

¹² U.S. War Department, *War Department Annual Reports, 1913*, vol. 2, 991.

¹³ House, "Locks and Dams," 9.

¹⁴ Robert Pilk, Linda Greene, Mary McMenimen, and Elaine Rideout, *Reconnaissance Survey: Brownsville/Monongahela Valley, Pennsylvania/West Virginia* (Washington, D.C.: U.S. Department of the Interior, National Park Service, 1991).

by Belgian glass workers; Monessen, named by optimistic local boosters, aspired to be as great a steel industry city as Essen, Germany.¹⁵

The Mercantile Bridge Company

It appears that the idea to bridge the Monongahela at North Charleroi was hatched in 1900 by a group of five McKeesport, Pennsylvania, entrepreneurs. On 9 July 1900, the Commonwealth of Pennsylvania granted the Charleroi and Monessen Bridge Company a charter to build a bridge spanning the Monongahela River between the borough of North Charleroi in Washington County and Rostraver Township in Westmoreland County. According to the charter filed in the Washington County courthouse, the Charleroi and Monessen Bridge Company was formed

... for the erection, construction and maintenance of a bridge for travel and transportation of passengers, vehicles and street cars and all other purposes for which a bridge may be used, over and across the Monongahela River ... at a point five hundred (500) feet above or south of Dam No. 4 ... and for the construction and maintenance of the approaches to said bridge. The location of said bridge being about two miles from any other incorporated bridge over said stream, namely about two miles from the Belle Vernon bridge.¹⁶

In compliance with Section 9 of the 1899 river and harbor act, the Charleroi and Monessen Bridge Company submitted plans for their proposed structure for approval by the Secretary of War and Chief of Engineers.¹⁷ This approval was granted and subsequently, on 3 March 1901, the U.S. Congress passed "An Act To authorize the Charleroi and Monessen Bridge Company to construct and maintain a bridge across the Monongahela River."¹⁸ The act required the Charleroi and Monessen Bridge Company to begin construction of the bridge within one year, and have it completed within three years, from the date of the passage of the act.

¹⁵ Matthew S. Magda, *Monessen: Industrial Boomtown and Steel Community 1898-1980* (Harrisburg: Pennsylvania Historical and Museum Commission, 1985); Martinet, *Charleroi: The First 100 Years*. See also Curtis Miner and Richard O'Connor, *A Magic City in an Industrial Valley: A Social History of Charleroi, Pennsylvania* (Pittsburgh: Historical Society of Western Pennsylvania, 1989); and John P. Hoerr, *And the Wolf Finally Came: The Decline of the American Steel Industry* (Pittsburgh: University of Pittsburgh Press, 1988) for more detailed historical materials related to Charleroi, Monessen, and the surrounding Monongahela Valley.

¹⁶ Washington County, Pennsylvania, *Charter Book 1* (Recorder of Deeds, Washington County Courthouse, Washington, Pennsylvania), 89.

¹⁷ 56th Cong., 3rd sess., chap. 425.

¹⁸ "An Act To authorize the Charleroi and Monessen Bridge Company to construct and maintain a bridge across the Monongahela River," *U.S. Statutes at Large* 31 (1901): 1451-53.

The Charleroi and Monessen Bridge Company never realized its plans to build a bridge at North Charleroi. Except for its charter, the company filed no legal instruments in Washington County and acquired no real estate for its proposed bridge. The Charleroi and Monessen Bridge Company allowed its authorization to expire. In January 1904 Congress amended the 1901 act extending the time for completion of the bridge to 3 March 1904.¹⁹ The 1904 legislation is the final record of the Charleroi and Monessen Bridge Company.

While the Charleroi and Monessen Bridge Company principals were allowing their legislative window enabling construction of the bridge to close, another group of entrepreneurs embarked on a similar plan to bridge the Monongahela River at North Charleroi. In March 1904 a group of six businessmen from Pittsburgh, Finleyville, North Charleroi, and Charleroi applied for a charter from the Commonwealth of Pennsylvania to incorporate the Mercantile Bridge Company. The charter, granted 25 March 1904, assumed that the Charleroi and Monessen Bridge Company plan would eventually be realized.²⁰ Capitalized at \$5,000, the Mercantile Bridge Company was chartered

For the purpose of constructing and maintaining a bridge over the Monongahela River, from a point on land of the North Charleroi Land Company, a corporation, and said point being about 700 feet south of Lock No. 4 Dam; thence crossing said river on a parallel line between 700 and 800 feet south of said dam to a point in a public alley in Rostraver Township, Westmoreland County; the proposed bridge being two and one-fourth miles from the nearest bridge crossing the same stream, to wit: The Belle Vernon Bridge Company's bridge, and from 150 to 300 feet south of proposed location of the Charleroi and Monessen Bridge Company's bridge as shown on the application for a State charter. The proposed bridge of the Mercantile Bridge Company will cross the P. V. & C. R.R. track at an elevation of sixty-six feet or more.²¹

Like the Charleroi and Monessen Bridge Company, the Mercantile Bridge Company had to secure approval from the War Department and the U.S. Congress before proceeding with construction of the bridge. On 10 December 1903, Brig. Gen. G. L. Gillespie, the Army Chief of Engineers, informed Congress that the War Department had approved the plans submitted by the Mercantile Bridge Company for its Monongahela River Bridge.²² Four months later, Congress

¹⁹ U.S. Congress, House, "Bridge Over the Monongahela River," 58th Cong., 2nd sess., 1904, H. Rept. 416.

²⁰ Commonwealth of Pennsylvania, *List of Charters of Corporations During the Two Years Beginning June 1, 1903 and Ending May 31, 1905* (Harrisburg: Commonwealth of Pennsylvania, 1905), 109.

²¹ Commonwealth of Pennsylvania, *List of Charters*, 109.

²² House, "Bridge Over the Monongahela River."

passed H. R. 3578, "An Act To authorize the Mercantile Bridge Company to construct a bridge over the Monongahela River...."²³

With all of the legislative and regulatory hurdles behind it, the Mercantile Bridge Company was free to begin work on its bridge. Construction on the bridge, however, did not begin until the spring of 1906, more than two years after the Mercantile Bridge Company was clear to proceed. Newspaper accounts indicate that the company underwent a radical reorganization in 1906, perhaps spurred by the death of one of the original subscribers.

The charter granted the company by the Commonwealth of Pennsylvania identified A. H[enry] Nelson, John Percival, Tom P. Sloan, Henry Sheets, Charles Bateman and B. C. Sloan as the original subscribers.²⁴ According to the *Pittsburgh Post*, Percival died some time after the charter was granted.²⁵ At the time the bridge was built, according to plates above both portals, the company consisted of John K. Tener (President), Charles F. Thompson (Vice President) and David McCloskey (Secretary and Treasurer); the plates also note engineer Emil Swensson.²⁶ None of the original principals remained after the reorganization.²⁷

The reorganized Mercantile Bridge Company began acquiring land for the bridge's approaches in April 1906. By the end of May 1906, construction on the bridge had already begun. On 1 June 1906, the *Daily Independent* reported that the first pier "at the North Charleroi approach" was near completion. "The ground pillars for the structural iron work are all in and the foundation piers for the steps leading from Railroad Street and to toll house were finished Monday," wrote the *Daily Independent*.²⁸

No records of the Mercantile Bridge Company appear to survive; they might have provided more details about the bridge's construction and the contractors involved. Newspaper reports during its construction and after its completion, however, provide some insight into who the Mercantile Bridge Company hired to build its bridge.

Emil Swensson was born on 12 December 1858 in Jalborg, Denmark. He was educated in civil and mechanical engineering in Sweden and Germany. Swensson's early professional years were spent working as a harbor engineer in Warburg, Sweden. In 1880, Swensson

²³ U.S. Congress, House, "An Act To authorize the Mercantile Bridge Company to construct a bridge over the Monongahela River, Pennsylvania, from a point in the borough of North Charleroi, Washington County, to a point in Rostraver Township, Westmoreland County," 58th Cong., 2nd sess., 1904, H. R. 3578.

²⁴ Washington County, *Charter Book* 3, 43.

²⁵ "Multitude Turns Out to Witness Monster Parade," *Pittsburgh Post*, 3 November 1907.

²⁶ Tener, a Charleroi businessman, later served one term as governor of Pennsylvania, from 1811 until 1815; see Martinet, *Charleroi: The First 100 Years*, 15.

²⁷ Despite such a substantial reorganization, no charter amendment was filed with the Commonwealth of Pennsylvania. It appears that Tener et al. bought out all or most of the stock held by the charter subscribers.

²⁸ "Work on New Bridge Is Progressing — One Pier Already Completed," *Daily Independent* (Monessen, Pennsylvania), 1 June 1906.

emigrated to the United States, settling first in New York. Two years later he was hired by the Pennsylvania Railroad. After a brief stint with the Phoenix Bridge Company, Swensson moved to Pittsburgh, where he worked with both the Keystone Bridge Company and its successor, the American Bridge Company. In 1901, shortly after the formation of the American Bridge Company, Swensson entered private practice as a consulting engineer in Pittsburgh. He retired in 1917 and died two years later, on 13 May 1919.²⁹

In designing the bridge, engineer Swensson and any architect(s) with whom he collaborated had to meet specific design criteria established by the War Department and codified in the act authorizing the Mercantile Bridge Company to build its structure.³⁰ According to the enabling legislation,

[T]he channel span of any bridge built under the provisions of this Act shall not be less than fifty-four feet above the level of the water at pool full in said river, measured to the lowest part of the superstructure thereof, nor shall the said span be less than three hundred feet in length in the clear, and the piers of the bridge shall be parallel with the current of the river, and the said span shall be over the main channel at ordinary water....

... That the bridge authorized to be constructed under this Act shall be so located and built that navigation under it shall be reasonably free, easy and unobstructed, and to secure that object the bridge company shall submit to the Secretary of War, for his examination and approval, a design and drawing of the bridge and a map of the location, giving for the space of three-fourths of a mile above the proposed location the depths and currents of all points of the same and the depths and currents as far below the proposed location as he may require, and also to give the location of any other bridge for three-fourths of a mile above and below the proposed location, together with all other information touching the said bridge and river as may be deemed requisite by the Secretary of War to determine whether said bridge when built will conform to the provisions of this Act and cause any unreasonable obstruction to the navigation of the river or injuriously affect the flow of water.³¹

²⁹ George S. Davison, "Memoir of Emil Swensson," *Transactions of the American Society of Civil Engineers* 84 (1921): 917.

³⁰ House, "An Act To authorize the Mercantile Bridge Company."

³¹ House, "An Act To authorize the Mercantile Bridge Company."

The contract to build the superstructure was awarded to the American Bridge Company.³² Structural steel work was slated to begin 1 October 1906, according to Monessen's newspaper, the *Daily Independent*.³³ The trusses most likely were assembled at the company's Ambridge works and then shipped by rail to the construction site.³⁴ Steel used in the trusses was fabricated by the Carnegie Steel Company.³⁵

The American Bridge Company was formed by the horizontal integration of twenty-four bridge companies in the spring of 1900.³⁶ On 9 May 1900, the Carnegie Steel Company transferred the title to its real property assets in Pittsburgh, to the newly formed American Bridge Company for a nominal ten dollars.³⁷

Newspapers reported that the Mercantile Bridge Company spent \$300,000 to build the Charleroi-Monessen Bridge.³⁸ Construction was plagued by several delays, including the suspension of work during the winter of 1906-07, a strike against the American Bridge Company, a structural failure, and flood damage to the bridge's falsework.³⁹

One of the most devastating setbacks suffered during construction of the Charleroi-Monessen Bridge occurred on Tuesday, 4 June 1907, when a portion of the falsework collapsed into the river. The timber was washed downstream and over the dam at Lock No. 4. It was recovered by a steamer owned by the McBeth-Evans Glassworks of Charleroi and towed back to

³² "The Fatted Calf Has Been Slain: The City Awaits Her Honor Guests," *Daily Independent* (Monessen, Pennsylvania), 1 November 1907. There are no surviving records from the American Bridge Company, according to Raymond Shepherd, director of Old Economy Village in Ambridge, Pennsylvania (interview by author, 24 July 1997; see appendix for transcript).

³³ "Bridge Getting Along Nicely," *Daily Independent* (Monessen, Pennsylvania), 7 August 1906.

³⁴ "Bridge Getting Along Nicely." By 1906, the American Bridge Company, one in a series of corporate entities responsible for building the Charleroi-Monessen Bridge's superstructure, was a subsidiary of the giant U.S. Steel Corporation. Organized as a holding company under New Jersey's 1889 general incorporation law that allowed corporations to own the stock of other "foreign" companies, i.e., those chartered in other states; see Chandler (1990), 30. See Victor C. Darnell, *Directory of American Bridge-Building Companies 1840-1900*, Occasional Publication No. 4 (Washington, D.C.: Society for Industrial Archaeology, 1984), 85, for an brief overview of the American Bridge Company.

³⁵ Beams on the Charleroi-Monessen Bridge are embossed "Carnegie."

³⁶ See Darnell, *Directory of American Bridge-Building Companies*, 85.

³⁷ Allegheny County, Pennsylvania, *Deed Book 1085* (Recorder of Deeds, Allegheny County Courthouse, Pittsburgh, Pennsylvania), 13.

³⁸ "The Fatted Calf Has Been Slain"; "Multitude Turns Out to Witness Monster Parade."

³⁹ "Why Bridge is Held Up," *Daily Independent* (Monessen, Pennsylvania), 2 November 1906; "Multitude Turns Out to Witness Monster Parade."

the bridge site.⁴⁰ Construction work had resumed on the bridge after a winter break just one month before the collapse. Ironically, one newspaper wrote just after the break, "A force of about fifty men are engaged on the work and as all the material is now on hand there is little chance of delay."⁴¹

One month after the collapse of part of the bridge's falsework, a flood caused by days of heavy rain at the head of the Monongahela River in West Virginia washed away the entire falsework system at the bridge site. Although navigation was interrupted up and down the river because of the flooding, the *Daily Independent* reported "The Mercantile Bridge Company met the heaviest loss along the river."⁴² The damage caused by the flood set construction back by three months; observers at the time estimated the loss at \$40,000, however, later reports suggested that it actually was closer to a \$20,000 to \$25,000 loss.⁴³

Prior to completion of the bridge, the only way to cross the Monongahela River in the vicinity of Charleroi was by ferry at Lock No. 4.⁴⁴ According to newspaper accounts of the bridge's opening, it was constructed to provide a streetcar service between Charleroi and Monessen as well as to provide an uninterrupted line of trolley service between Charleroi and Pittsburgh.⁴⁵ By the time construction on the bridge began, both towns were bustling independent industrial communities. A streetcar link, wrote the *Pittsburgh Post*, would open up "a new avenue of trade" allowing residents of each borough the opportunity to work and shop close to home or across the river.⁴⁶

The streetcars to be used on the new bridge had arrived in March in anticipation of a July opening. "[P]eople are beginning to imagine themselves straight through to the Magic City [Charleroi] with the inconveniences attendant upon ferrys [sic] and foot bridges eliminated,"

⁴⁰ "False Work on Bridge Crashes into River," *Daily Independent* (Monessen, Pennsylvania), 4 June 1907.

⁴¹ "Work Has Again Begun on Bridge," *Daily Independent* (Monessen, Pennsylvania), 9 May 1907.

⁴² "Reports Say Flood Was the Most Destructive for Years," *Daily Independent* (Monessen, Pennsylvania), 19 July 1907.

⁴³ "False Bridge Work Sent Sprawling Over Dam at Lock 4," *Daily Independent* (Monessen, Pennsylvania), 18 July 1907; "The Fatted Calf Has Been Slain"; "Multitude Turns Out to Witness Monster Parade." Construction of the Charleroi-Monessen Bridge was fraught with mishaps in addition to the various collapses and start-up delays. The *Daily Independent*, for instance, reported that a steel worker fell forty feet while working on a pier into mud at the river's edge. The worker, Ben Brown, suffered a broken jaw and internal injuries; see "Structural Steel Worker's Fall Results in a Fractured Jaw," *Daily Independent* (Monessen, Pennsylvania), 30 August 1907.

⁴⁴ "The Fatted Calf Has Been Slain."

⁴⁵ "The Fatted Calf Has Been Slain"; "Multitude Turns Out to Witness Monster Parade."

⁴⁶ "Multitude Turns Out to Witness Monster Parade."

wrote the *Daily Independent* shortly after the West End Street Railway's cars arrived.⁴⁷ The paper added,

The cars were purchased from the J. G. Brill Co. of Philadelphia and are the latest improved type of the Brill semi-convertible. They are handsomely furnished in mahogany with cane seats and are fitted up with the latest improved type of oil lubricating motor. They are fitted up with an improved window which cannot fall and by which the car can be made as comfortable as a summer car. Several other undesirable features are eliminated, among them the small platform at the rear on which passengers sometimes stand. Illuminated signs bearing the words "Monessen" and "Charleroi" are at either end of the cars. They have a seating capacity of 32.

The bridge opened to limited streetcar service on Sunday, 20 October 1907.⁴⁸ The West Side Electric Street Railway Company played a key role in the early history of the Charleroi-Monessen Bridge.⁴⁹ The company, for instance, was responsible for paving the street leading to the bridge's approach on the Monessen side. According to the Monessen *Daily Independent*, the street was "paved with brick, 18 feet wide" and was "double tracked from the borough line to the bridge approach."⁵⁰

Three years after the first streetcar passed over the Charleroi-Monessen bridge, on 2 December 1910, the Mercantile Bridge Company executed a ninety-nine year lease with the West Side Electric Street Railway Company granting the trolley line the "right to operate street cars over and across" the bridge, as well as to collect tolls from passengers (which were then paid to the Mercantile Bridge Company). One condition of the lease was that the streetcar company was to "erect ten arc lights of not less than five hundred candle power electricity each at intervals of space on said bridge and to furnish said Bridge Company electric power therefor at actual cost to said Railway Company."⁵¹

Saturday, 2 November 1907, was a rainy, windy day.⁵² Despite the inclement weather, ceremonies opened the Charleroi-Monessen bridge to the public. Festivities in both Charleroi and Monessen were accentuated by a "Great Industrial Parade," fireworks, and speeches by local

⁴⁷ "Cars to Be Used on Monessen-Charleroi Bridge Have Arrived," *Daily Independent* (Monessen, Pennsylvania), 25 March 1907.

⁴⁸ "Can Now Ride Across the River," *Daily Independent* (Monessen, Pennsylvania), 21 October 1907.

⁴⁹ Also called "West Side Electric Company."

⁵⁰ "Getting Ready to Cross New Bridge," *Daily Independent* (Monessen, Pennsylvania), 15 May 1907.

⁵¹ Washington County, Pennsylvania, *Deed Book* 373 (Recorder of Deeds, Washington County Courthouse, Washington, Pennsylvania), 620.

⁵² "Multitude Turns Out to Witness Monster Parade."

business persons and politicians. Approximately 25,000 people turned out to witness the grand opening of the bridge at 1 p.m.⁵³ The *Washington Reporter* reported that "a special train of two cars" departed from Pittsburgh to attend the celebration.⁵⁴

When the bridge opened, it was "a web of steel 1800 feet long; a triumph of the rolling mill which manufactures of engineering skill."⁵⁵ "The bridge is 23 feet wide in the clear, double tracked for streetcars and vehicles, and a side foot way for pedestrians." The *Pittsburgh Post* wrote of the bridge:

... the bridge now stands complete with a double track trolley line, a wagon way and a sidewalk on the lower side.

The structure is a plain truss bridge with two 400-foot spans, a 200-foot stretch over the Pittsburgh and Lake Erie railroad tracks on the Monessen side, and two viaduct approaches of 400 feet each. The width of the structure is 23 feet clear.

... It has approaches as near perfection as possible, with a straight and uniform grade of six inches to the 100 feet, which was made possible by the elevation on both sides. The toll house is located on the Charleroi side, about 200 feet from the extreme end.⁵⁶

There are conflicting accounts of the initial toll to cross the Charleroi-Monessen Bridge. One local historian reported that the toll was three cents per person, however a 1910 lease between the Mercantile Bridge Company and the West Side Electric Street Railway Company indicates that the toll was two cents for pedestrian traffic and trolley passengers.⁵⁷

The Charleroi-Monessen Bridge has remained a vital component in the transportation system of the Monongahela Valley since it opened. Since 1907, the bridge has undergone regular maintenance and one substantial rehabilitation. The bridge was acquired by the Pennsylvania Department of Highways (now PennDOT) around 1957. Washington County newspaper reporter Scott Beveridge recalled walking across the bridge as a child during the late 1950s. He could remember most clearly the deteriorating wooden deck: "Planks were missing and you had to be real careful when crossing."⁵⁸ Beveridge also recalled that the toll house on the North Charleroi side was still standing, however, there were no longer any trolley cars running on the bridge. In 1985, the structure was closed for nearly a year, during which time its

⁵³ "Multitude Turns Out to Witness Monster Parade."

⁵⁴ "Bridge Opening Was Celebrated," *Washington (Pennsylvania) Reporter*, 2 November 1907.

⁵⁵ *Daily Independent*, 1 November 1907.

⁵⁶ "Multitude Turns Out to Witness Monster Parade."

⁵⁷ Martinet, *Charleroi: The First 100 Years*, 42; Washington County, *Deed Book* 373, 620.

⁵⁸ Scott Beveridge, interview by author, Washington, Pennsylvania, 25 June 1997.

CHARLEROI-MONESSEN BRIDGE

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(Page 14)

approaches were reconstructed and its deteriorating wooden deck was replaced in an \$8 million rehabilitation effort.⁵⁹ Shortly after the bridge reopened in December 1985, local officials mused that it was the first time that anyone could remember the bridge not having a weight restriction.⁶⁰ The bridge was listed in the National Register of Historic Places in 1988 as a contributing element to the multiple resource nomination, Highway Bridges Owned by the Commonwealth of Pennsylvania, Department of Transportation.

⁵⁹ *Valley Independent* (Monessen, Pennsylvania), 19 and 21 December 1985.

⁶⁰ *Valley Independent* (Monessen, Pennsylvania), 19 December 1985.

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APPENDIX: Interview Transcript

Transcript of a telephone interview, on the subject of American Bridge Company records, with Raymond Shepherd, director of the Pennsylvania Historical and Museum Commission's Old Economy Village (Ambridge, Pennsylvania), 24 July 1997.

Key:

DSR David S. Rotenstein

RS Raymond Shepherd

DSR: Can you tell me why you do not have the records of the American Bridge Company?

RS: As they were closing, they offered Old Economy — the Commissioner — any furniture that we wanted from their offices. So I went down to the Strip District [Pittsburgh] where all the records were and everything and took what I needed. When I got there I saw all these banks of records of files and so on and I asked what they were. They said, 'Well, they're our business records.' I said, 'I hope that you're going to do something with them. Would you think of giving them to the Commonwealth of Pennsylvania, to Old Economy for the archives?' And they said, 'Absolutely not. We don't want people going through our records and looking and finding mistakes and things like that.'

There was even an architect's drawing of one of their bridges, I recall, it was the Bay Bridge in San Francisco that was over top of these maybe ten file cabinets that were four drawers each, legal sized, and I said, 'Well, could you at least let us have that?' They said, 'Absolutely not.' So when I asked, and I will again ask, when I engineered our getting the furniture, to find out what did happen.

But it's my understanding that all the files were thrown on the trash heap in Pittsburgh to get rid of them. We do not have them and I do not believe that the Western Pennsylvania Historical Society [Historical Society of Western Pennsylvania, Pittsburgh] got them either, but you might want to check them.

DSR: Do you recall the name of the American Bridge Company official with whom you spoke?

RS: Not now.

... I think they're gone. We did our best to try and encourage — as a matter of fact, when I went back to the American Bridge headquarters here in Ambridge, there were probably a hundred photographs just sitting against the wall on the floors and I said, 'Well, gee, what about those photographs. What are you going to do with those?'

This is the time that it was U.S. Steel, that they were trying to place it before the Russian College went in there. I said, 'Would you give us some of the photos....' We do have

some photos, for instance, the building of their headquarters building back in 1905, 1910, whatever it was. And I said, 'It would be very nice to have that as a document of the history of Ambridge.' And they said, 'When we're finished with them, we might consider it.' But I've tried two or three times since then to get those photographs and they wouldn't give them to me.

[He explains that his efforts to secure the records were 'five or more years ago, at this point.']

DSR: You said something earlier [before the tape] about insurance liability. Was that something they said specifically?

RS: Oh yes, that was exactly the reason that they would not give them to us.

I said, 'These bridges, a lot of them have already been taken down and it would be such an important part of the history of bridges in the United States.' And they said, '[It's] of no importance. We're not interested in that, in these records to survive.'

ADDENDUM TO:
CHARLEROI-MONESSEN BRIDGE
Spanning Monongahela River at State Route 2018
North Charleroi
Washington County
Pennsylvania

HAER PA-467
PA, 63-NOCHA, 1-

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

FIELD RECORDS

HISTORIC AMERICAN ENGINEERING RECORD
National Park Service
U.S. Department of the Interior
1849 C Street NW
Washington, DC 20240-0001

HISTORIC AMERICAN ENGINEERING RECORD

CHARLEROI-MONESSEN BRIDGE

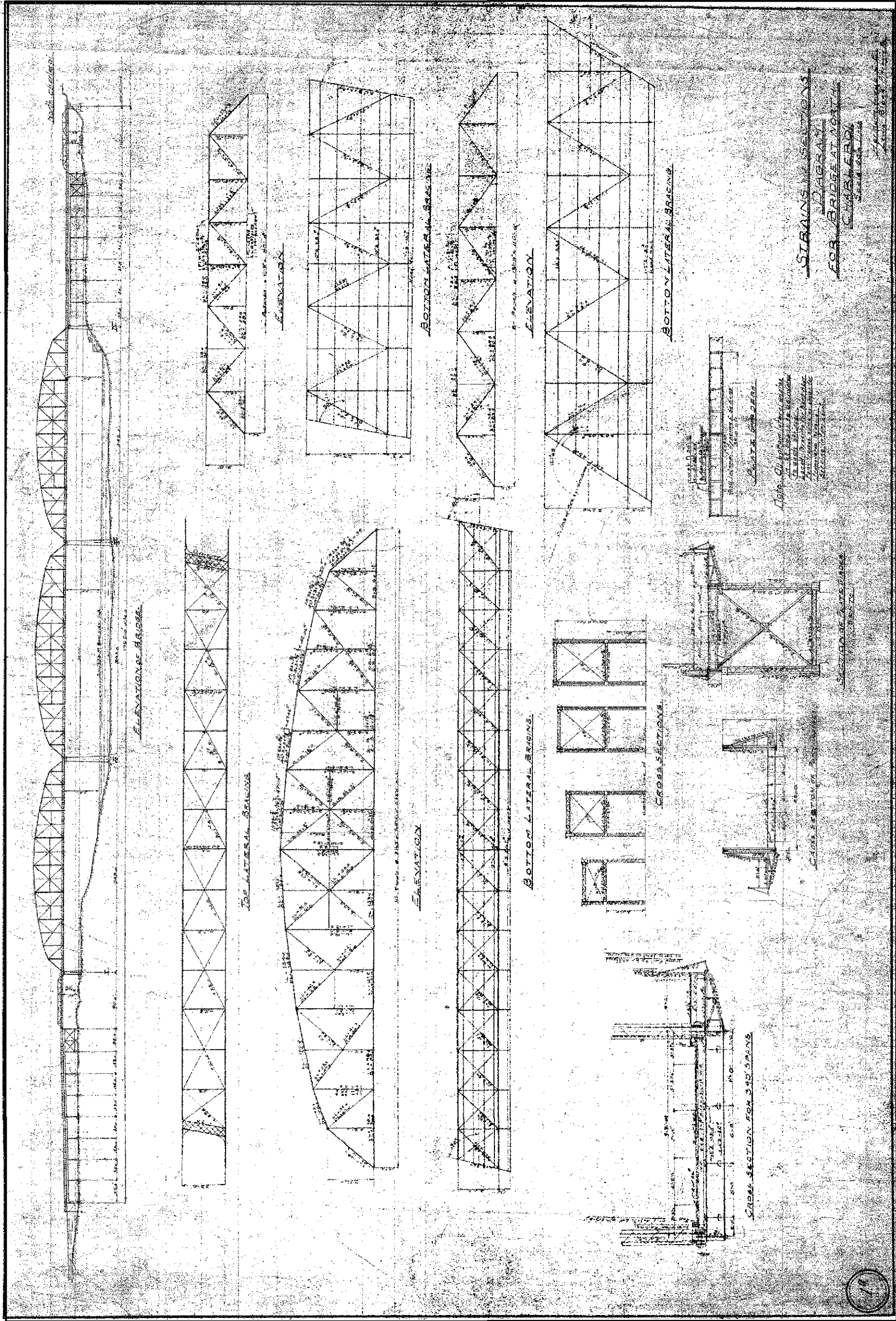
HAER PA-467

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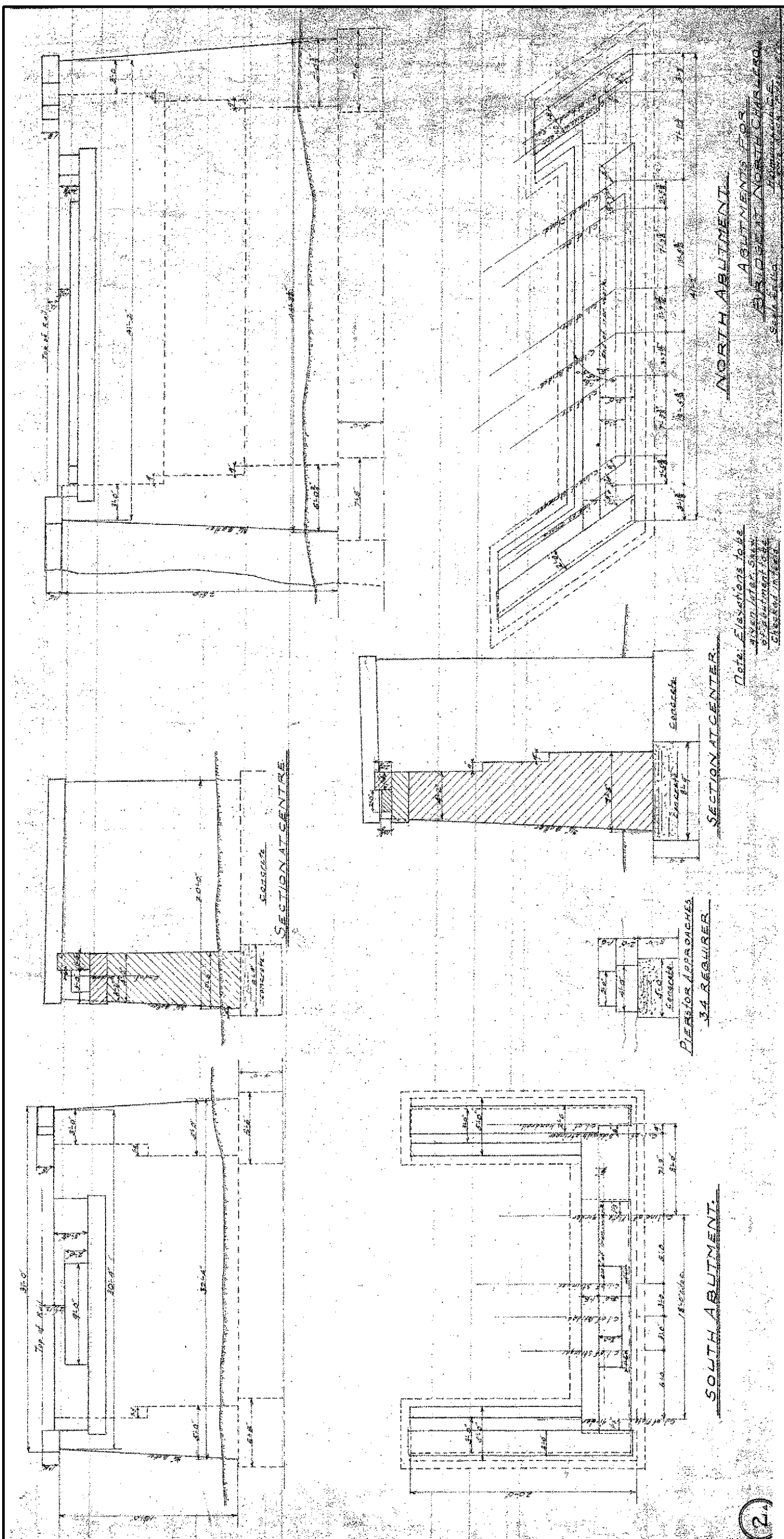
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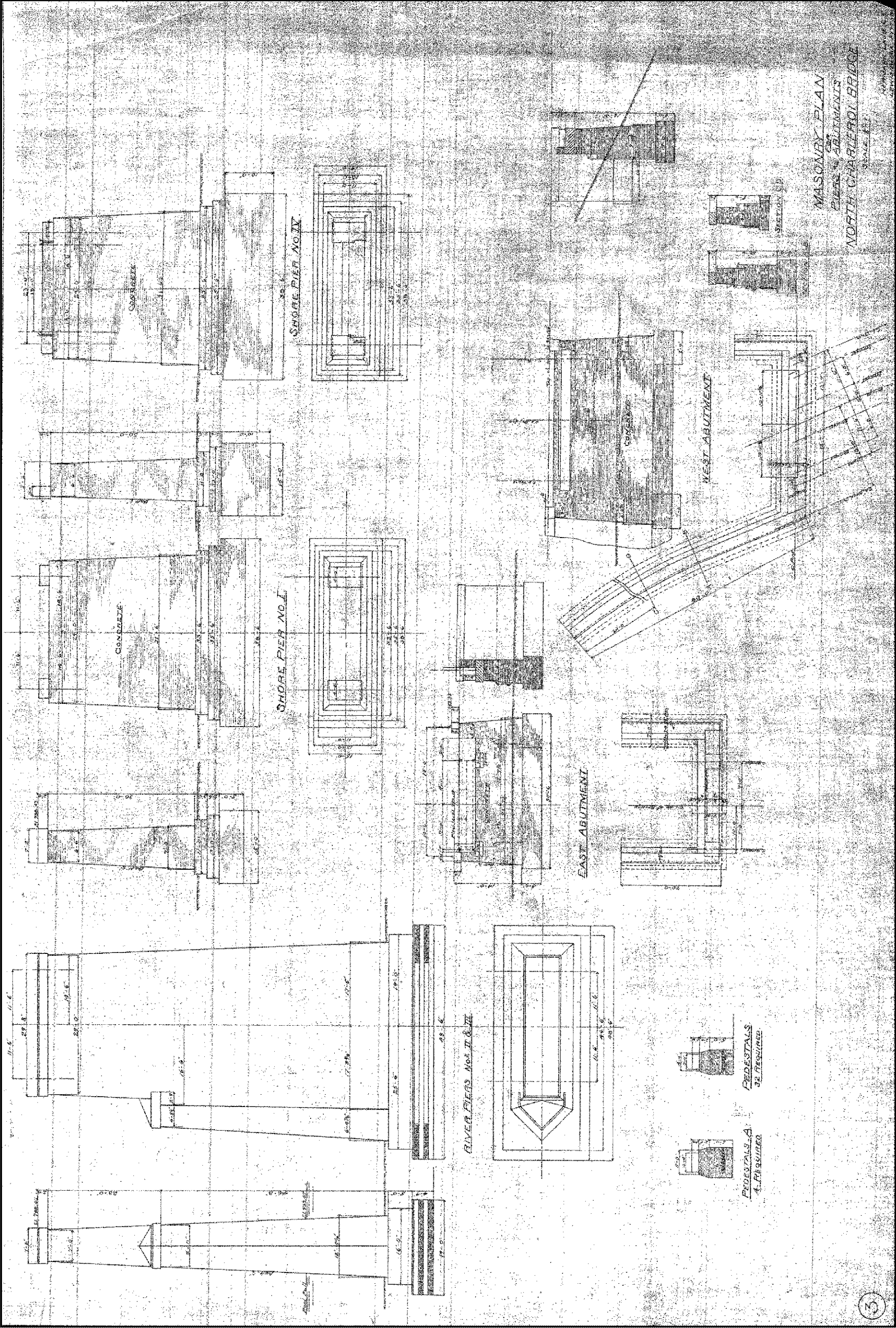


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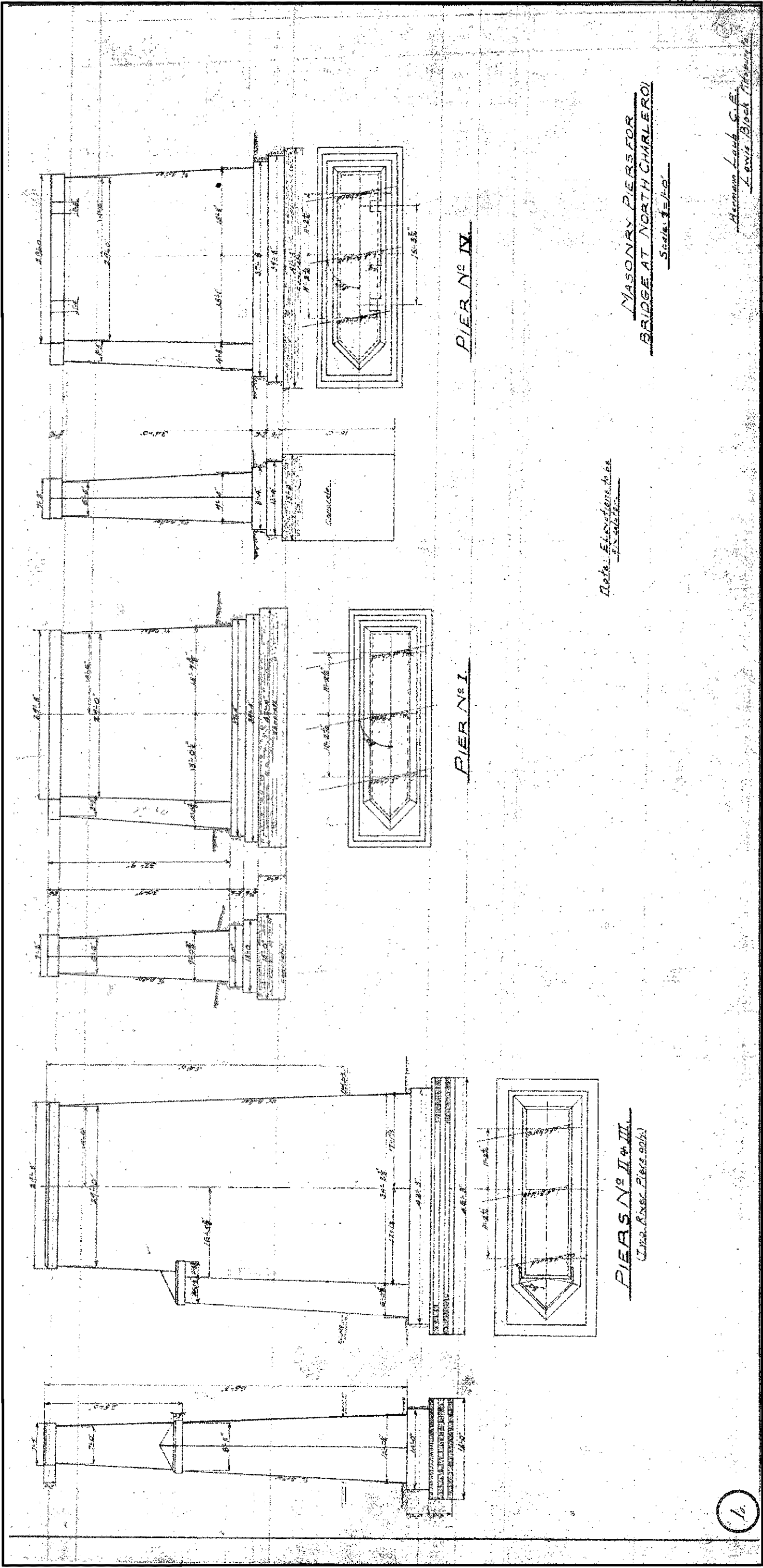
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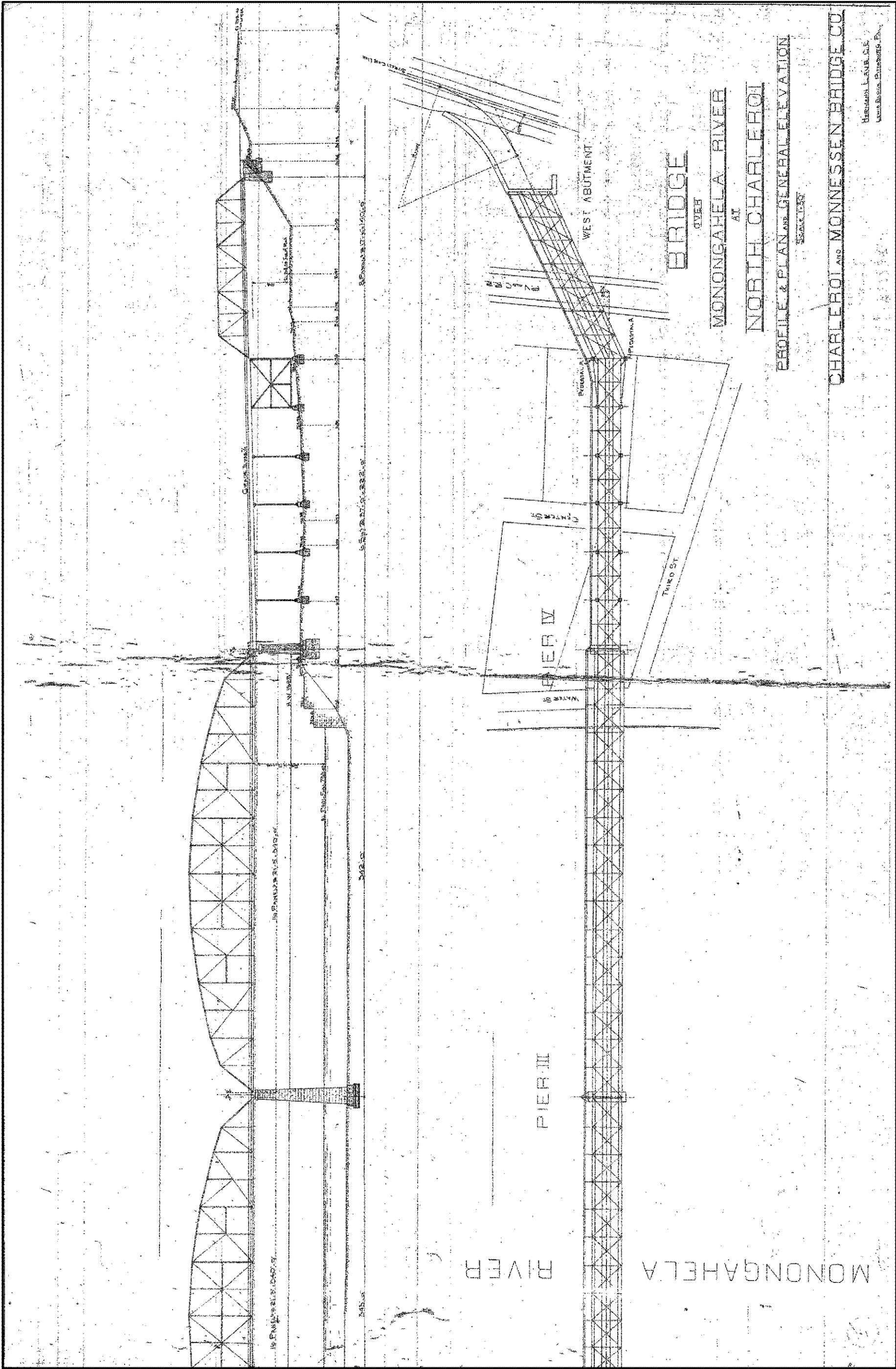




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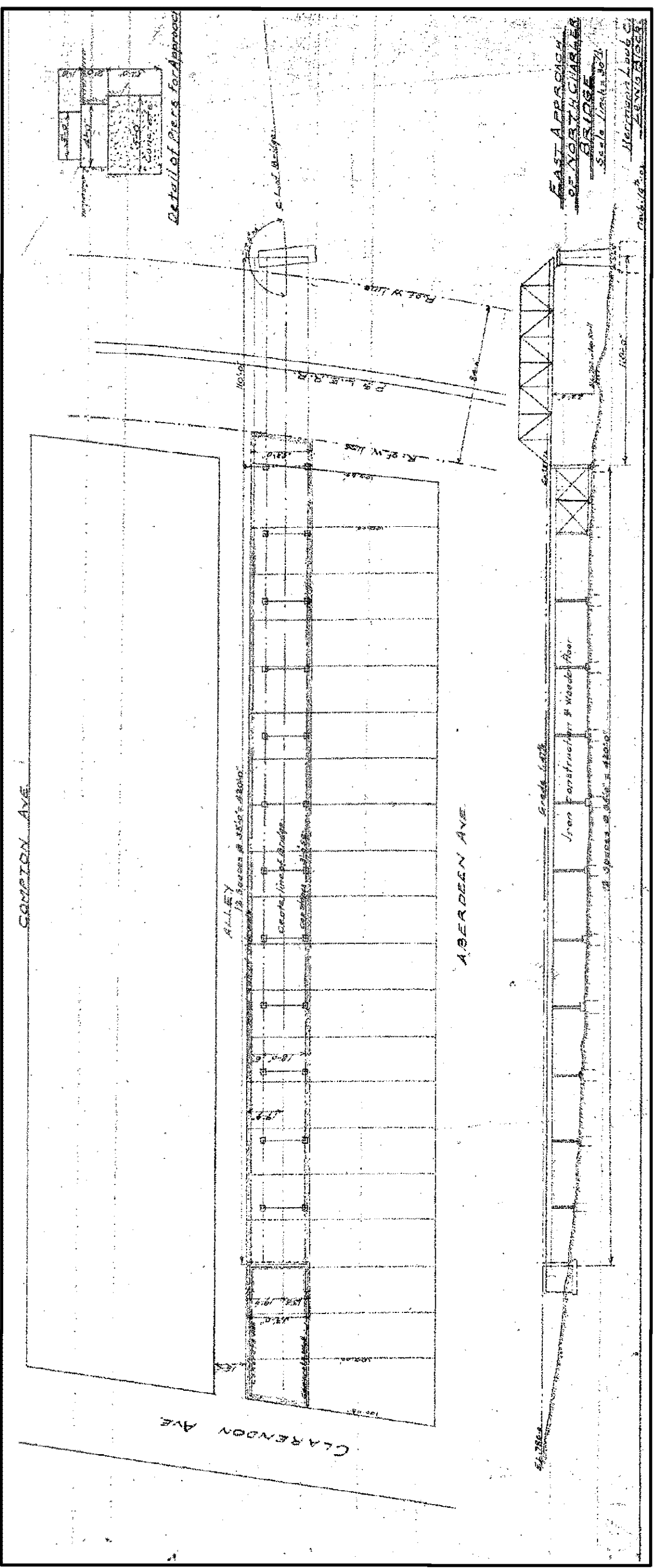
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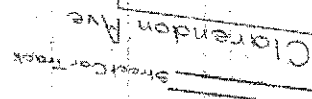


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CHARLEROI-MONESEN BRIDGE
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Sheet 4



112

Aberdeen Ave

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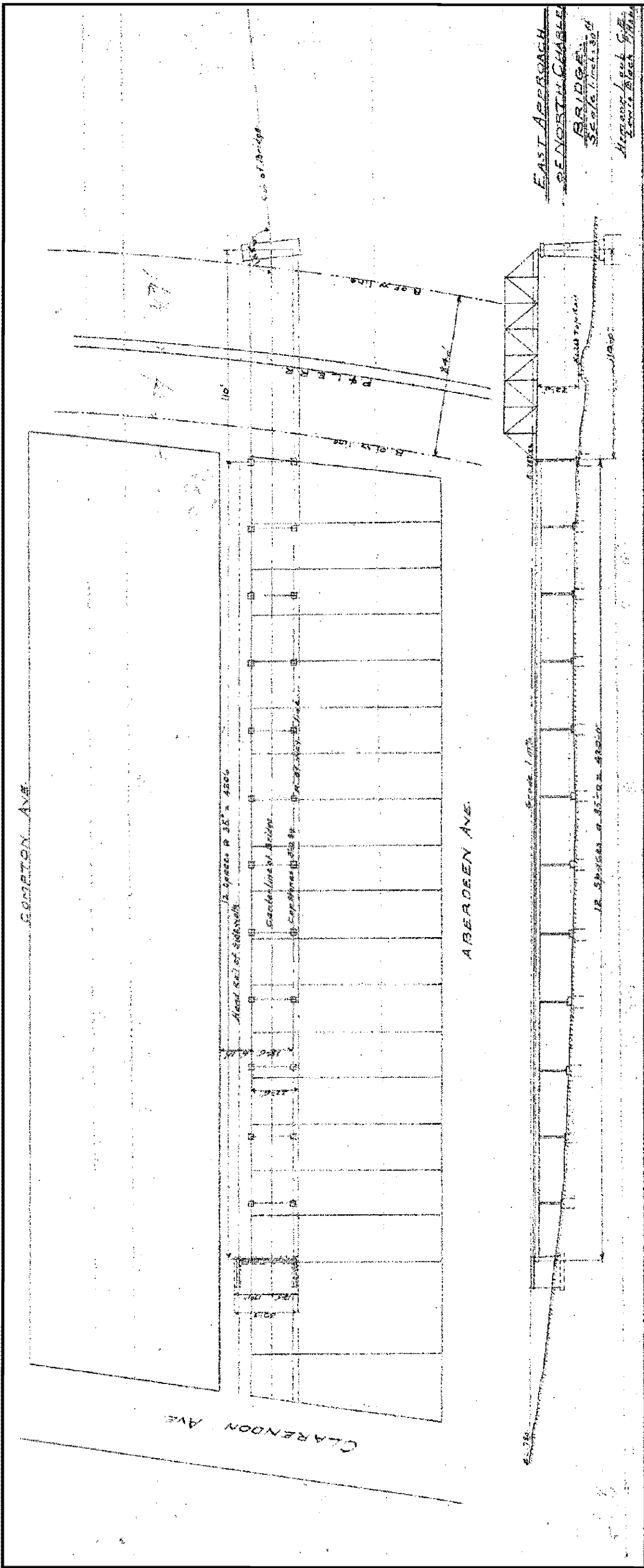
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AT NORTH CHARLESTON

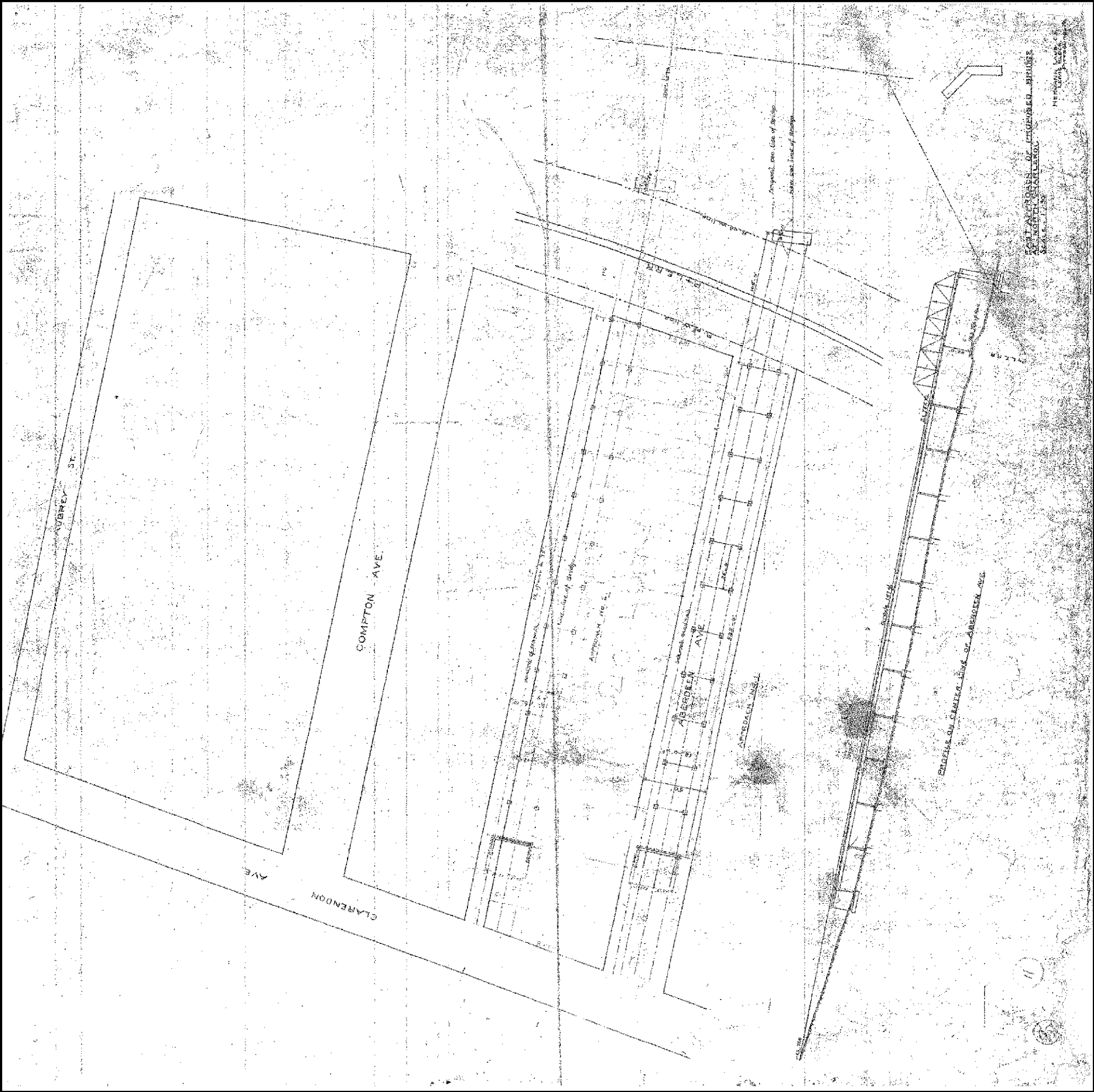
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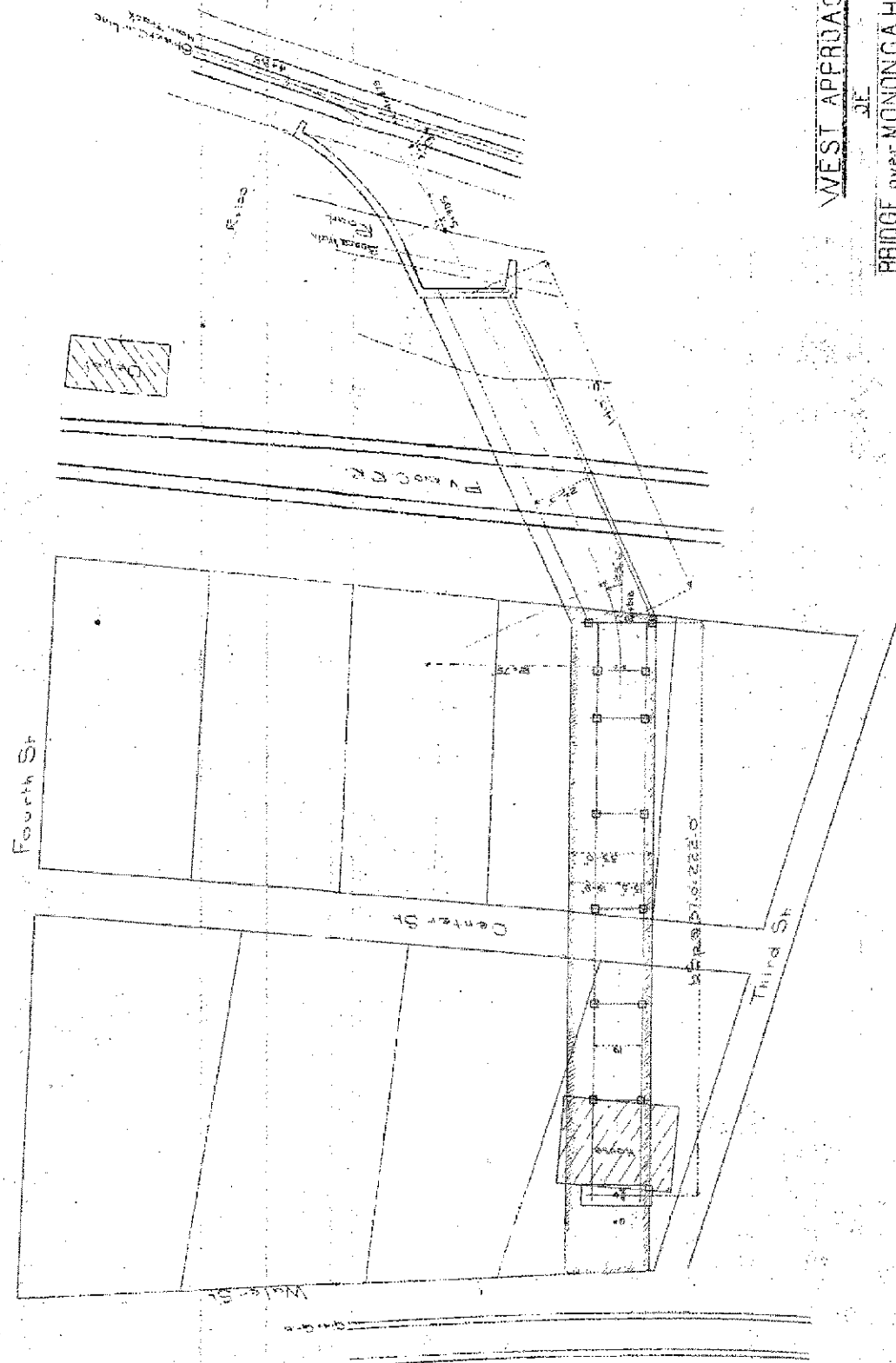
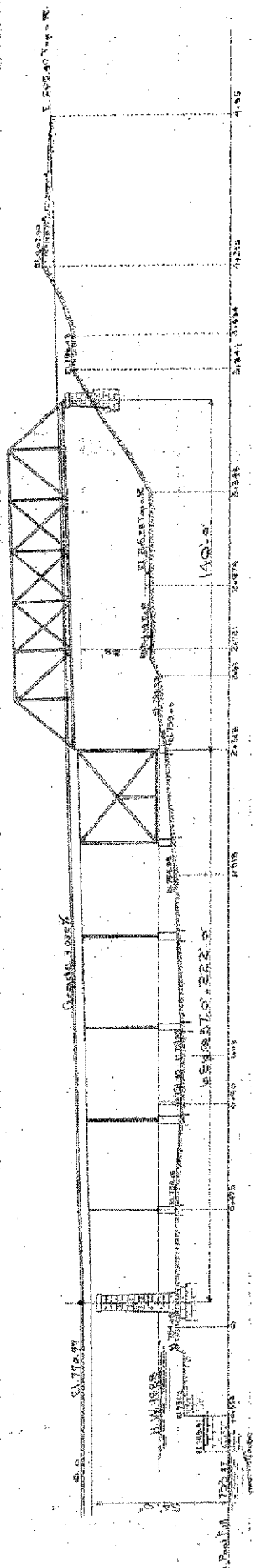
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Sheet 6





WEST APPROACH

31

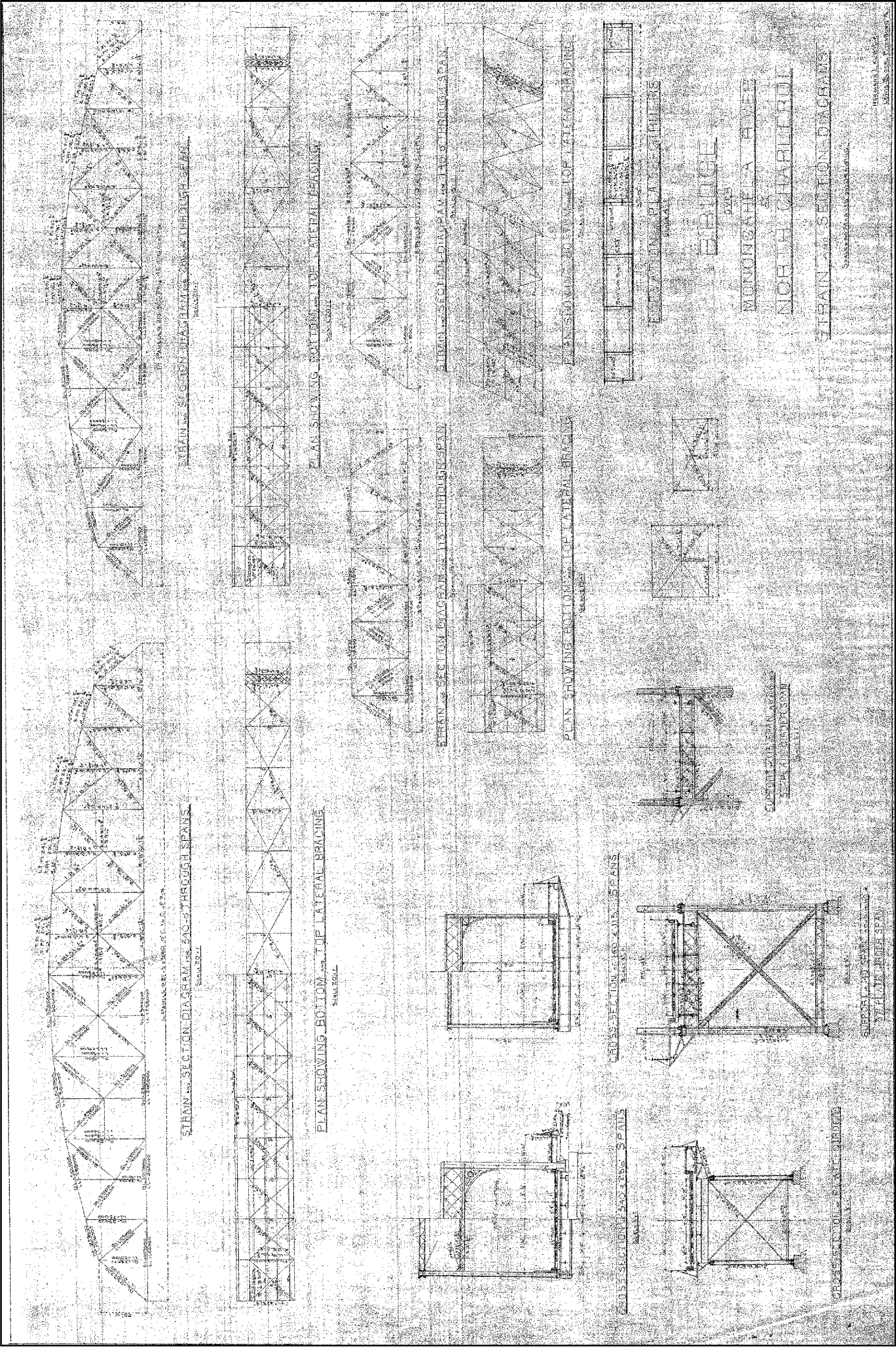
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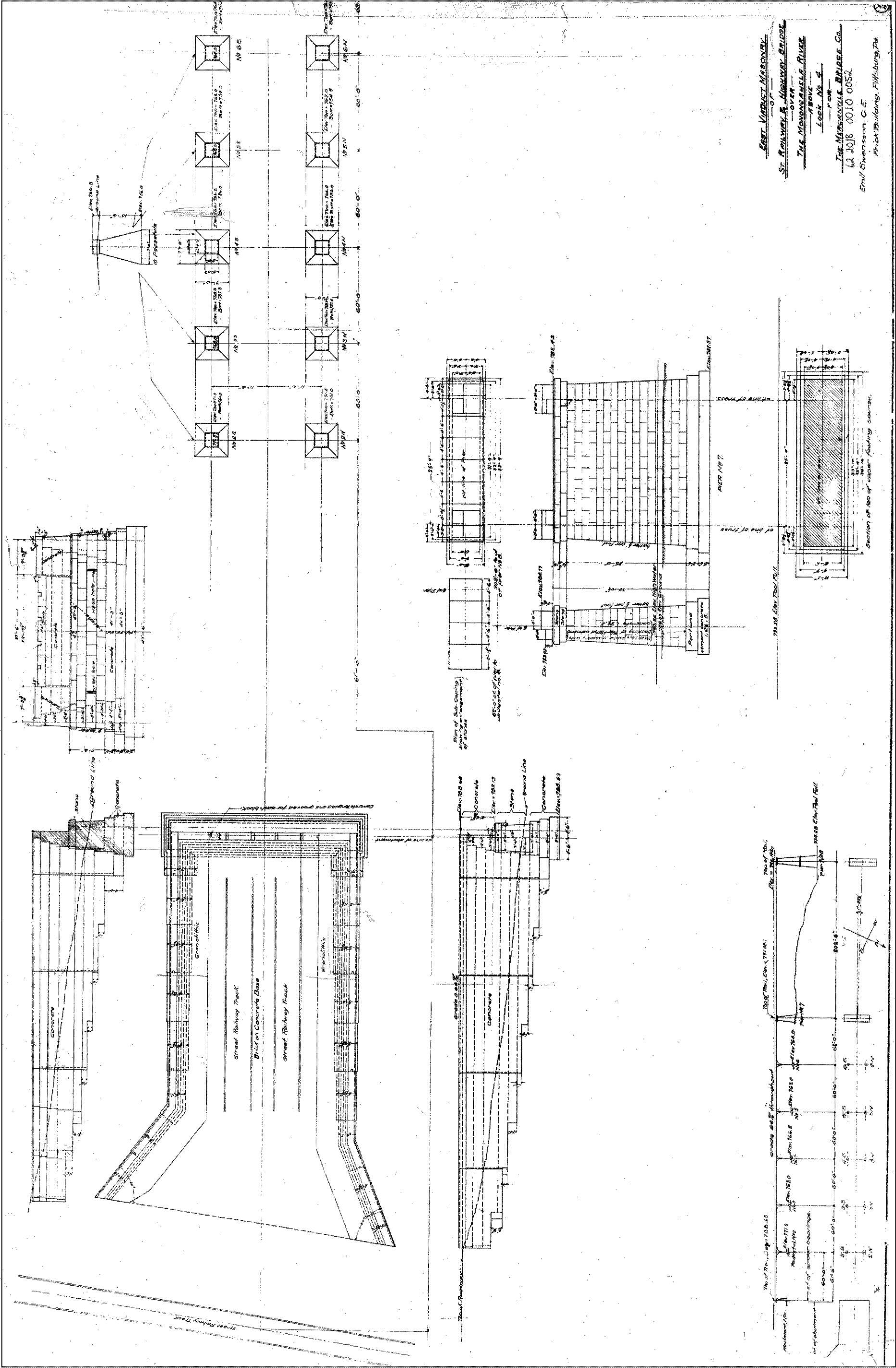
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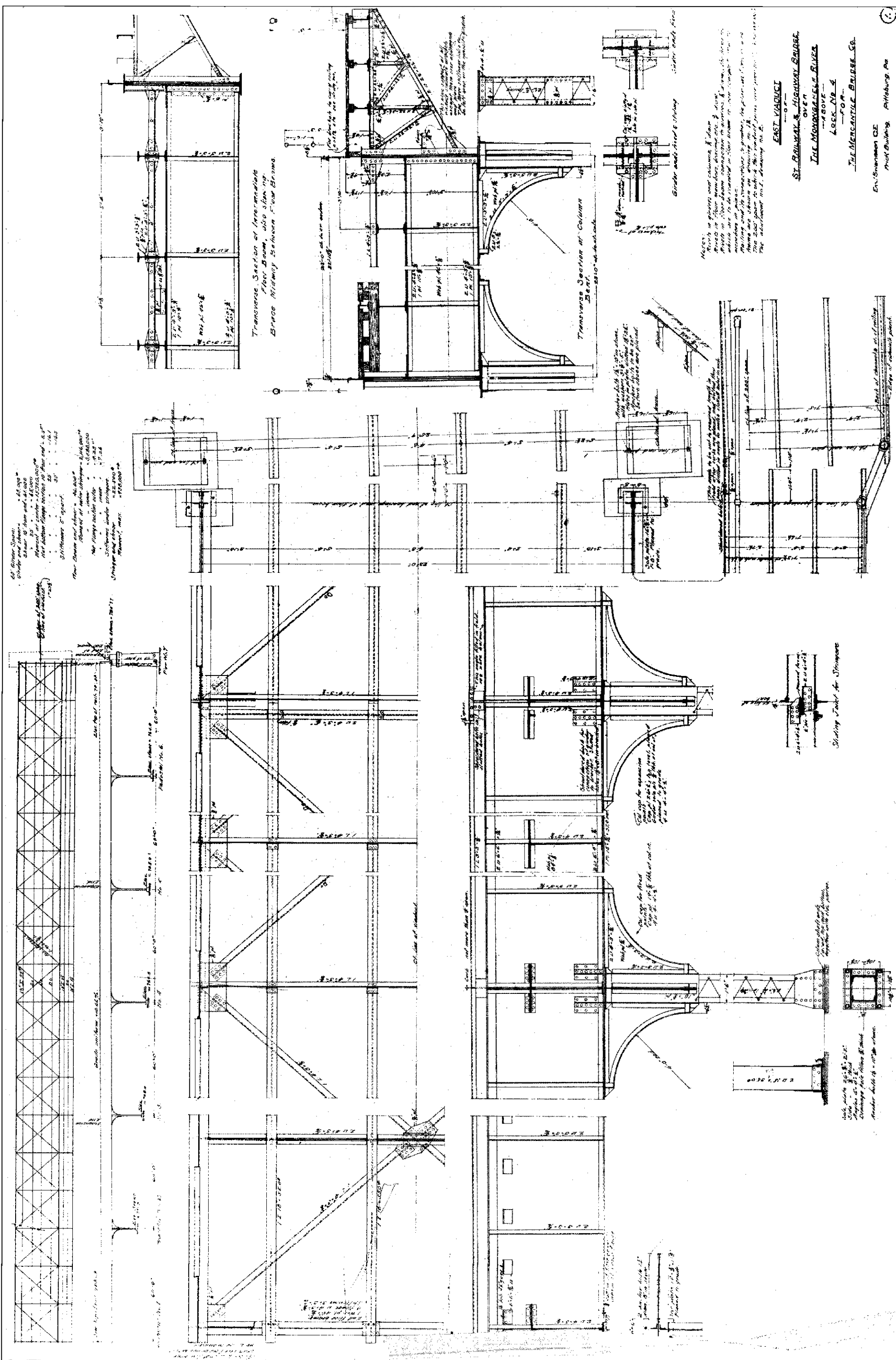
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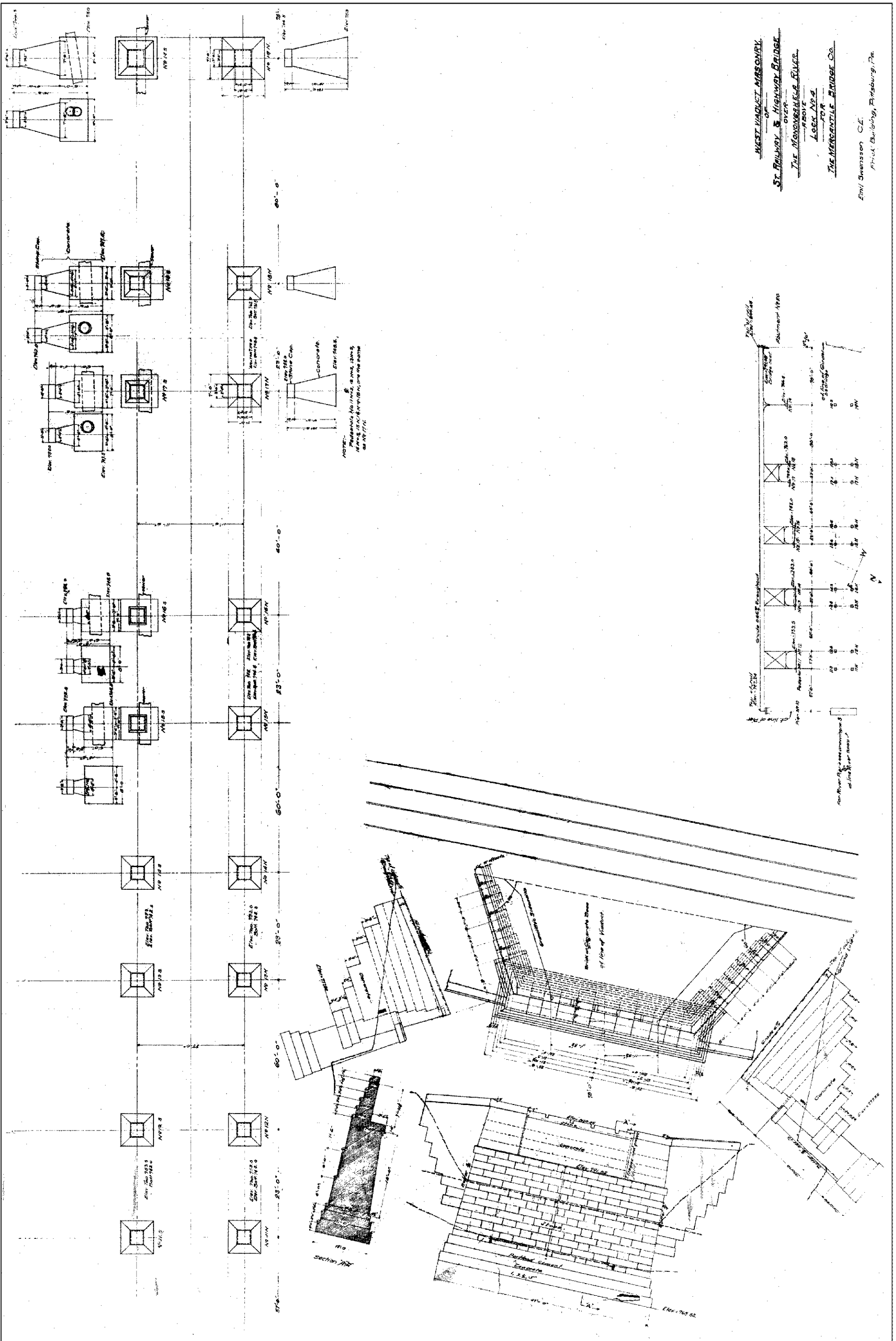
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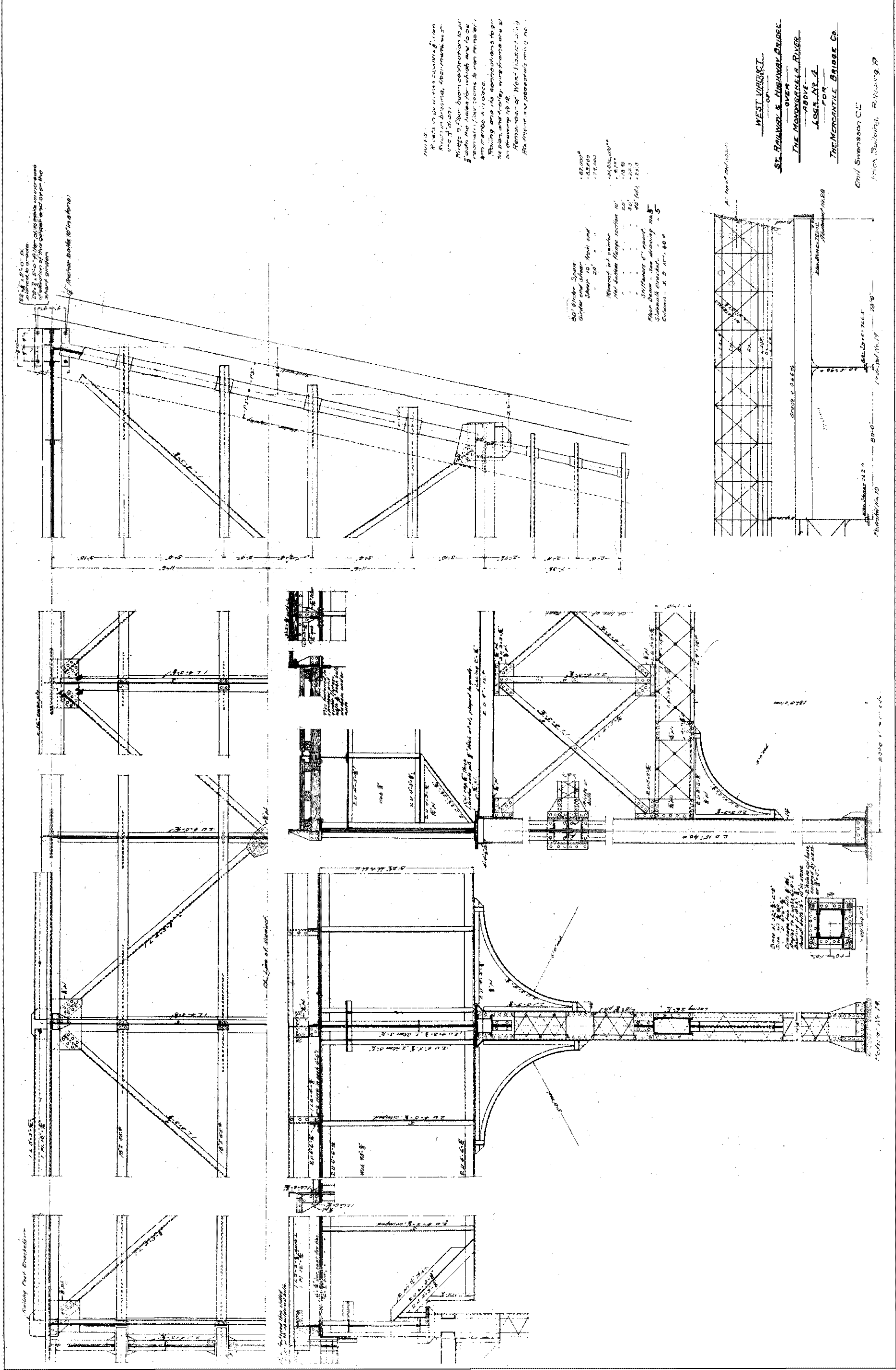




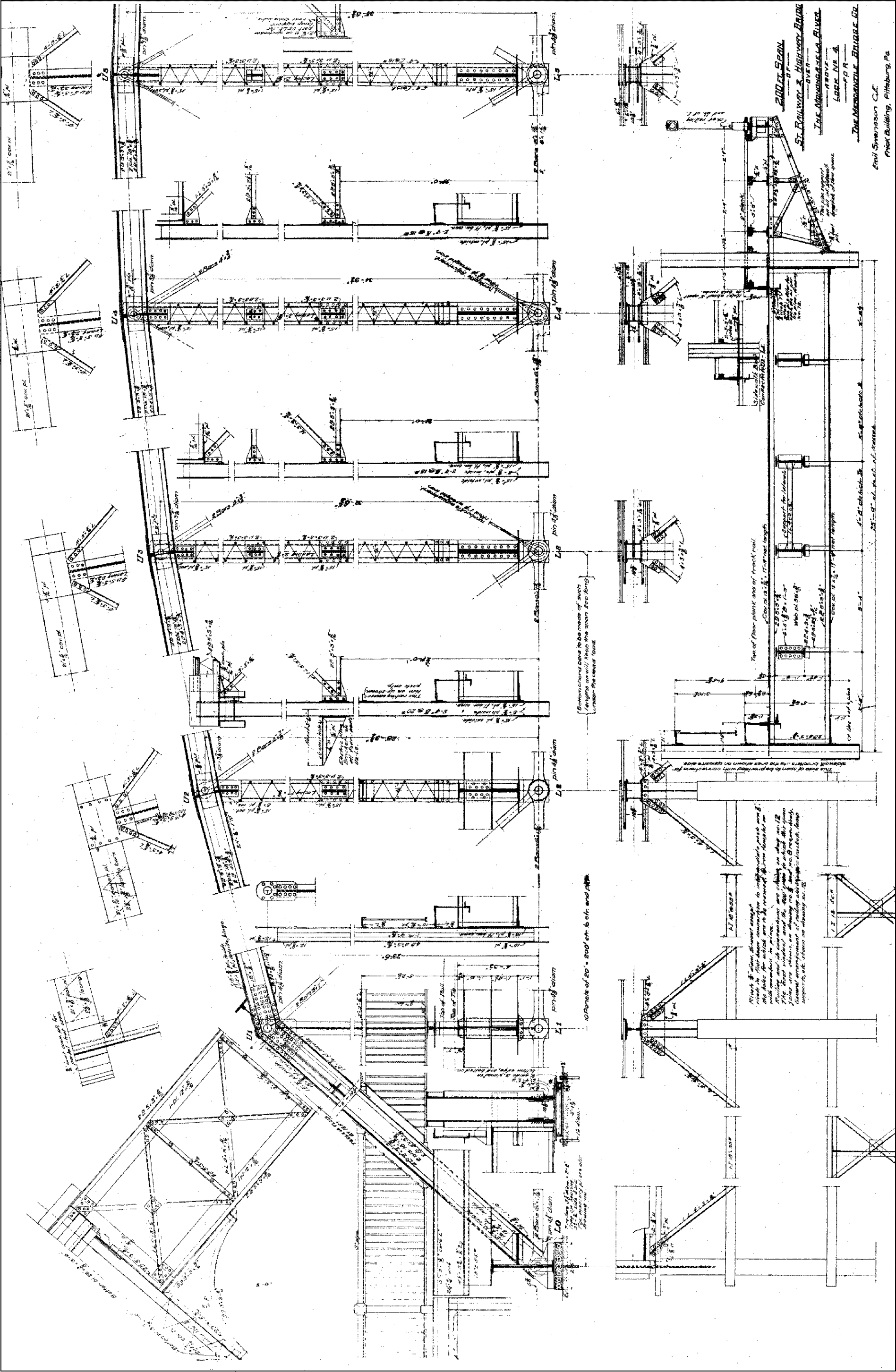
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Sheet 14

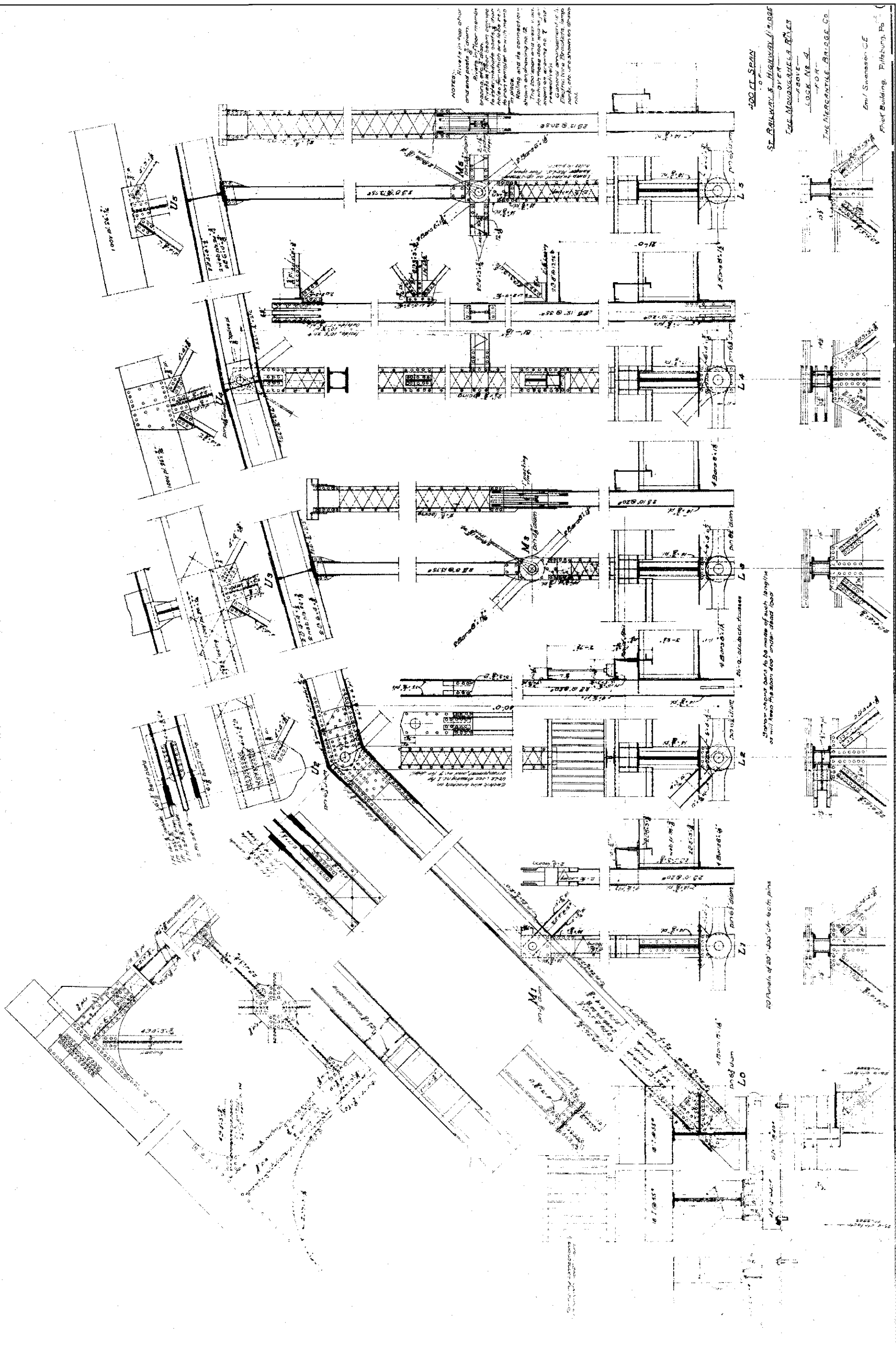


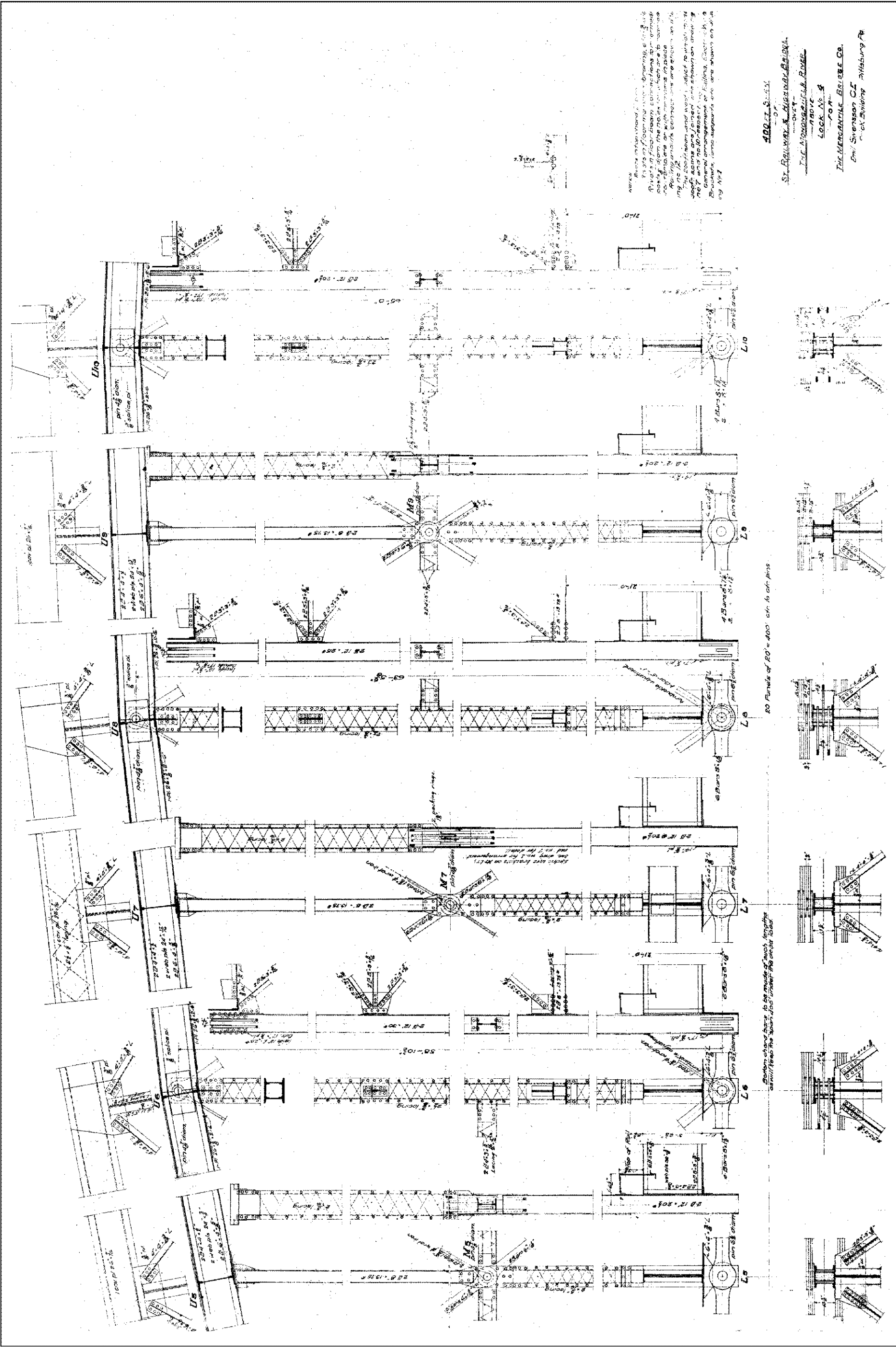


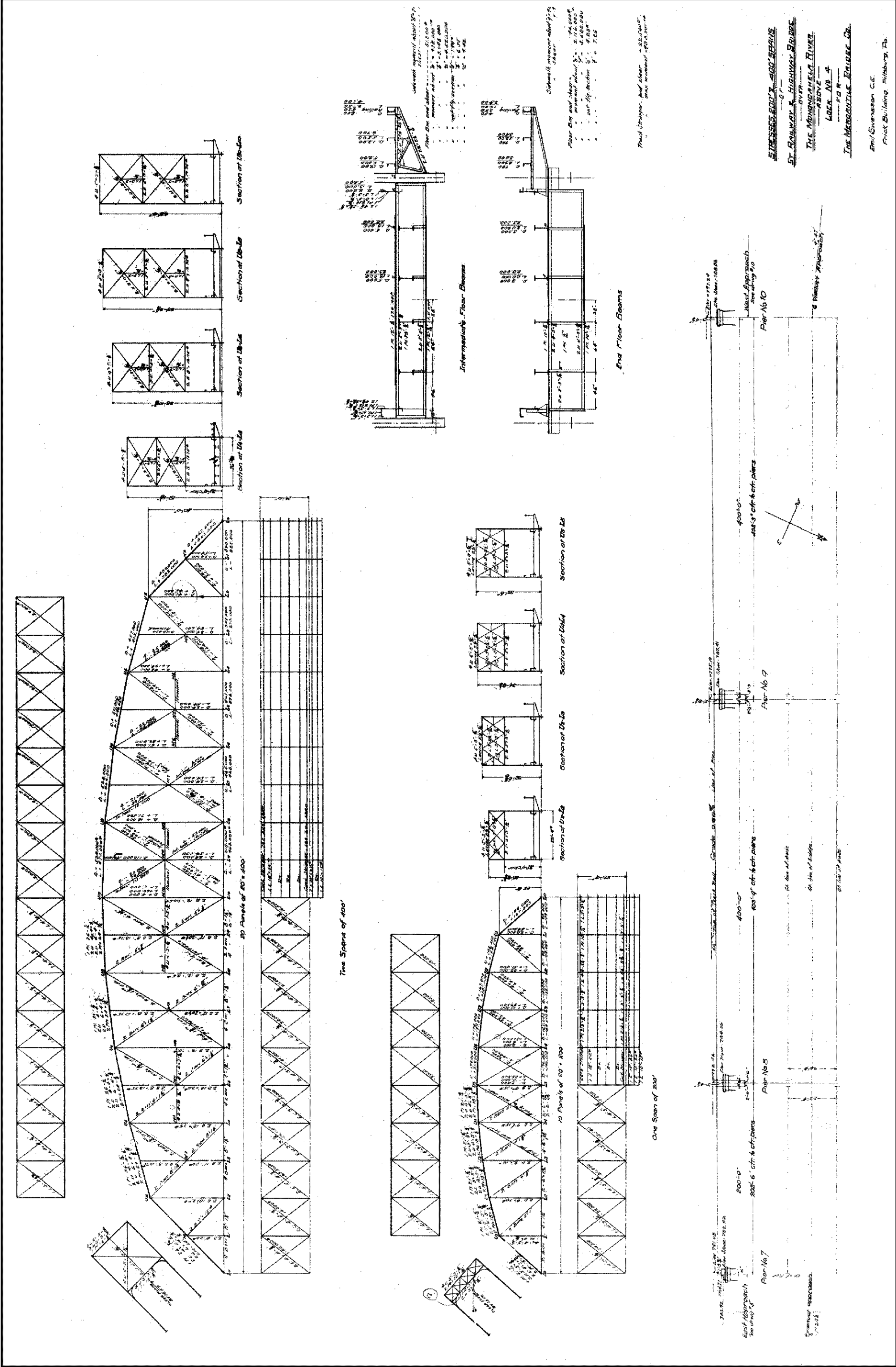








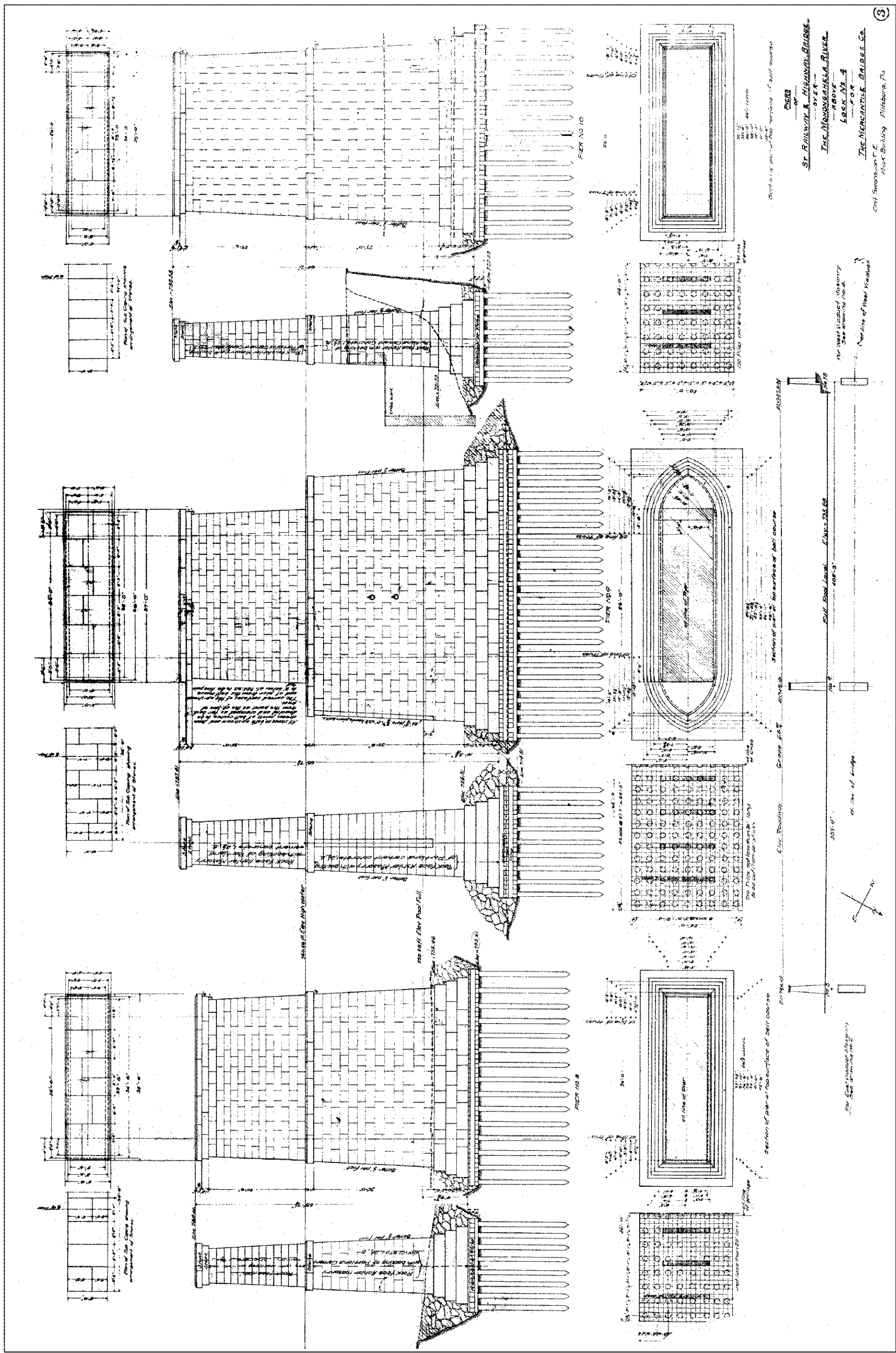




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Emil Svensson C.E.
Frick Building, Pittsburgh, Pa.

ST. RAILWAY & HIGHWAY BRIDGE
THE MONESSEN RIVER
LOCK NO. 4
THE HERBERT BRIDGE CO.



DESIGNED BY
ST. RAILWAY & HIGHWAY BRIDGE
OVER
THE MONONGAHELA RIVER
LOCK NO. 4
FOR
THE MERCANTILE BRIDGE CO.
Civil Engineer, Pittsburgh, Pa.

For West Viaduct Viaduct
See drawing No. 4
New line of West Viaduct

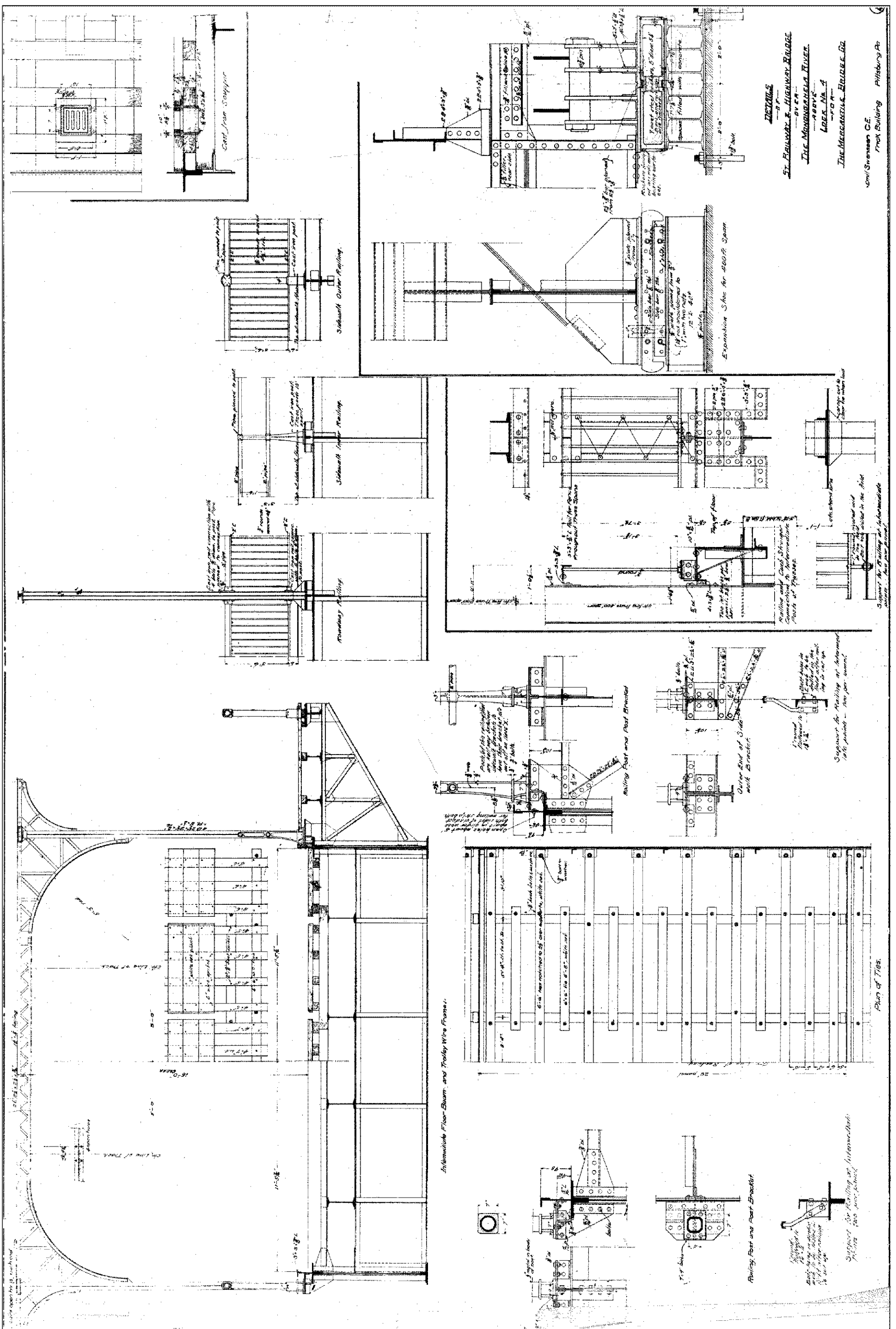
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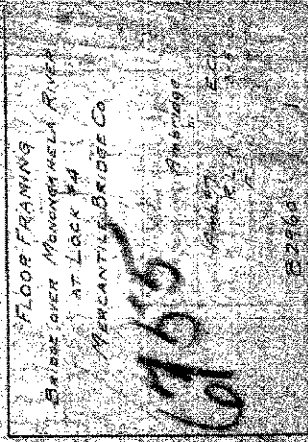
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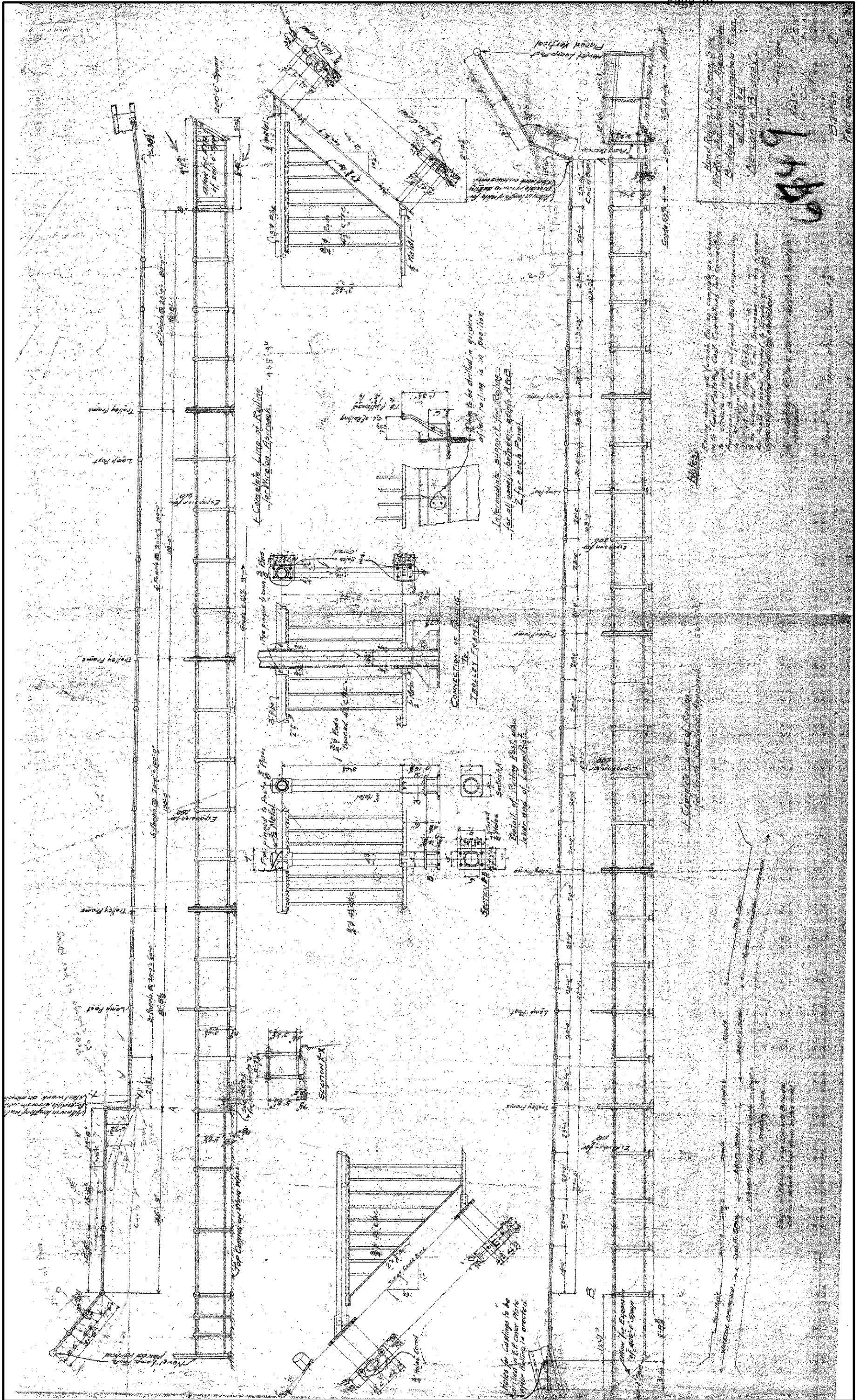


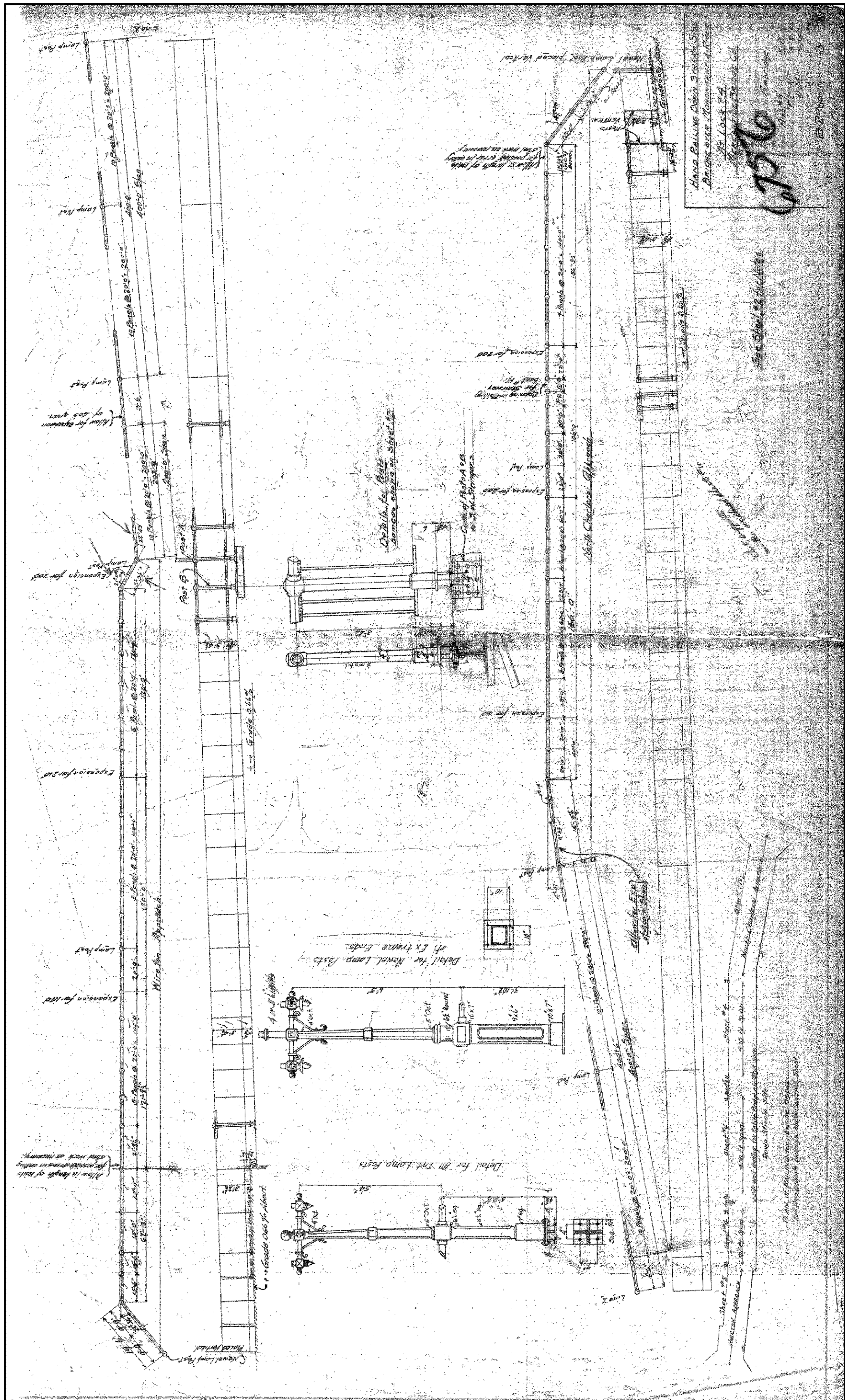
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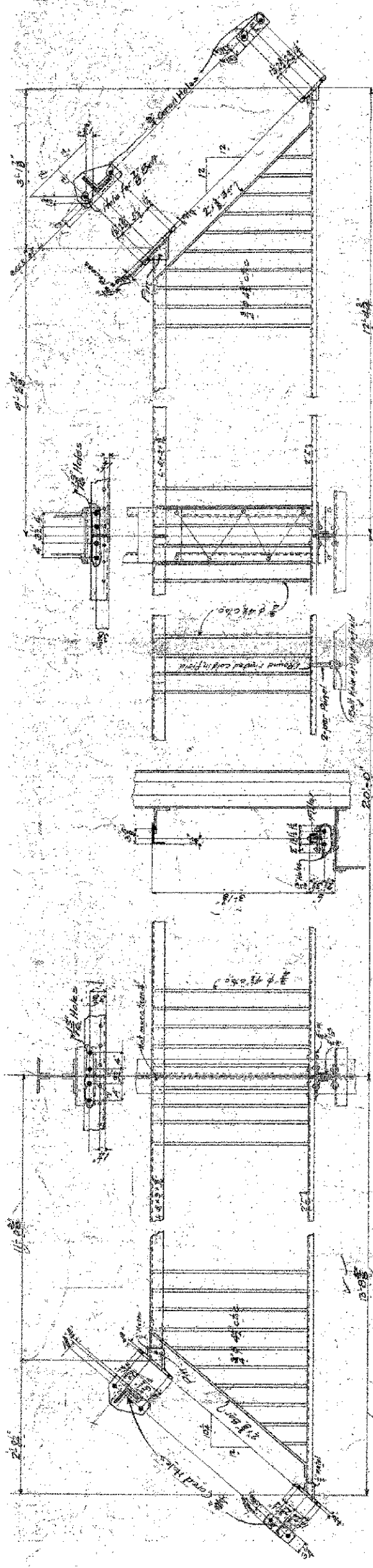








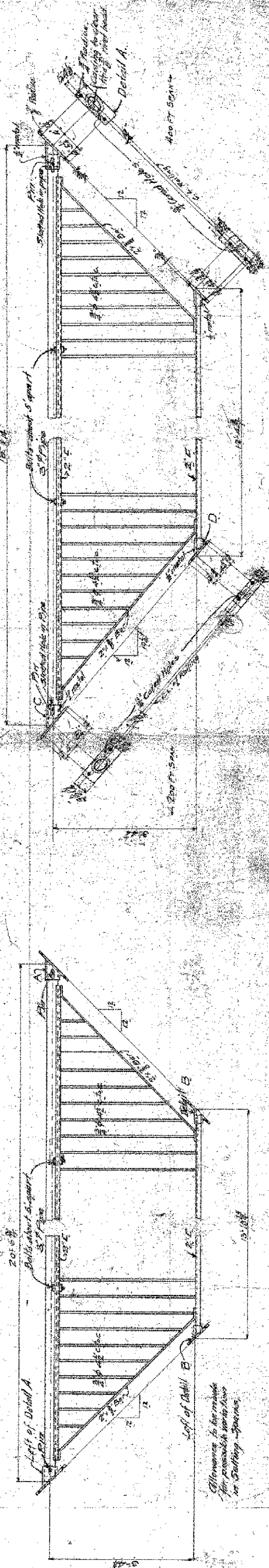
CHARLEROI-MONessen BRIDGE
HAER No. PA-467
Sheet 27



4-PANELS FOR 400 FT SPAN
2-AS SHOWN 2-OPP HAND

4-INTERMEDIATE PANELS FOR 200 & 400 FT SPANS
30 FOR 400 FT SPAN 6 FOR 200 FT SPAN

2-PANELS FOR 200 FT SPAN
1-AS SHOWN 1-OPP HAND



1-PANEL BETWEEN 200 & 400 FT SPANS
AT PIER #2
ALLOW FOR EXPANSION OF 400 FT SPAN

1-PANEL BETWEEN 400 FT SPANS
AT PIER #3
FIXED BOTH ENDS

HAND RAILING FOR P.N. SPAN
BRIDGE OVER MONESSEN RIVER
AT LOCK #4
MERCANTILE ENGINEERING CO.
P.O. BOX 100
PITTSBURGH, PA.
B2960
FIELD CHECKED BY: [Signature]

Sheet 28 of 28
Monessen Approach
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